REVISED AGENDA
WORKSHOP COMMISSION MEETING

6:00 PM - Wednesday, January 8, 2025
Commission Chambers

			Page
1.	CALL TO ORDER		
2.	PLEDGE OF ALLEGIANCE		
3.	ROLL CALL		
4.	DELETIONS OR WITHDRAWALS TO THE AGENDA		
5.	PRESENTATIONS		
	5.1.	Vulnerability Assessment - Kimley-Horn and Associates, Inc. Agenda Item Report - AIR-24-159 - Pdf	3 - 131
	5.2.	Stormwater Master Plan - Kimley-Horn and Associates, Inc. Agenda Item Report - AIR-24-160	132 - 763
	5.3.	Wastewater Master Plan - Craig A. Smith and Associates, LLC Agenda Item Report - AIR-24-161 - Pdf	764 - 1424
6.	REPORTS OF COMMITTEES AND TOWN STAFF		
	6.1.	Department Monthly Updates Agenda Item Report - AIR-24-155	1425 - 1515
7.	OLD BUSINESS		
8.	NEW BUSINESS		
	8.1.	Fiber for the Police Department - IT Director Pakula. Agenda Item Report - AIR-24-151	1516 - 1520
	8.2.	Ordinance Amending Section 2-125 - Town Attorney Horowitz Agenda Item Report - AIR-24-158	1521 - 1525
	8.3.	Authorization to Award a Contract for the Purchase and Installation of GeoSCADA Electronic Monitoring System Project Agenda Item Report - AIR-24-162	1526 - 1572
	8.4.	Approval of Meeting Minutes September 11, 2024, Budget Hearing September 11, 2024, Regular Commission Meeting September 25, 2024, Workshop Commission Meeting September 25, 2024, Final Budget Hearing October 15, 2024, Regular Commission Meeting	1573 - 1607

Agenda Item Report - AIR-24-157

9. DISCUSSION

9.1. Invoices exceeding $500.00 - Mayor Mohammed 1608
Agenda Item Report - AIR-25-001

9.2. VIA Actuarial Solutions Engagement Letter 1609 - 1622
Agenda Item Report - AIR-25-002

10. ATTORNEY COMMENTS

11. TOWN MANAGER COMMENTS

12. COMMISSIONER COMMENTS

12.1. Commissioner Jacobs
Acting Clerk Commissioner Kashem
Clerk Commissioner Hodgkins
Vice Mayor Morrissette
Mayor Mohammed

13. ANNOUNCEMENTS

13.1. Regular Commission Meeting, January 15, 2025 at 7:00 p.m.
Special Magistrate Hearing, January 15, 2025 at 9:00 a.m.
Workshop Commission Meeting, January 29, 2025 at 6:00 p.m.

14. ADJOURNMENT

IN ACCORDANCE WITH THE PROVISIONS OF F.S. SECTION 286.0105, IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE BOARD, AGENCY, OR COMMISSION WITH RESPECT TO ANY MATTER CONSIDERED AT THIS MEETING OR HEARING, HE OR SHE WILL NEED A RECORD OF THE PROCEEDINGS, AND, FOR SUCH PURPOSE, HE OR SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

ANY PERSON REQUIRING AUXILIARY AIDS AND SERVICES AT THIS MEETING MAY CALL THE TOWN CLERKS OFFICE AT 954-966-4600 AT LEAST TWO CALENDAR DAYS PRIOR TO THE MEETING. IF YOU ARE HEARING OR SPEECH IMPAIRED PLEASE CONTACT THE FLORIDA RELAY SERVICES BY USING THE FOLLOWING NUMBERS: 1-800-955-8770 (VOICE) OR 1-800-955-8771 (TDD)

DECORUM - ALL COMMENTS MUST BE ADDRESSED TO THE COMMISSION AS A BODY AND NOT TO INDIVIDUALS. ANY PERSON MAKING IMPERTINENT OR SLANDEROUS REMARKS, OR WHO BECOMES BOISTEROUS WHILE ADDRESSING THE COMMISSION, SHALL BE BARRED FROM FURTHER AUDIENCE BEFORE THE COMMISSION BY THE PRESIDING OFFICER, UNLESS PERMISSION TO CONTINUE OR AGAIN ADDRESS THE COMMISSION IS GRANTED BY THE MAJORITY VOTE OF THE COMMISSION MEMBERS PRESENT. NO CLAPPING, APPLAUDING, HECKLING OR VERBAL OUTBURSTS IN SUPPORT OR IN OPPOSITION TO A SPEAKER OR HIS/HER REMARKS SHALL BE PERMITTED. NO SIGNS OR PLACARDS SHALL BE ALLOWED IN THE COMMISSION CHAMBERS. PLEASE MUTE OR TURN OFF YOUR CELL PHONE OR PAGER AT THE START OF THE MEETING. FAILURE TO DO SO MAY RESULT IN BEING BARRED FROM THE MEETING. PERSONS EXITING THE CHAMBER SHALL DO SO QUIETLY.

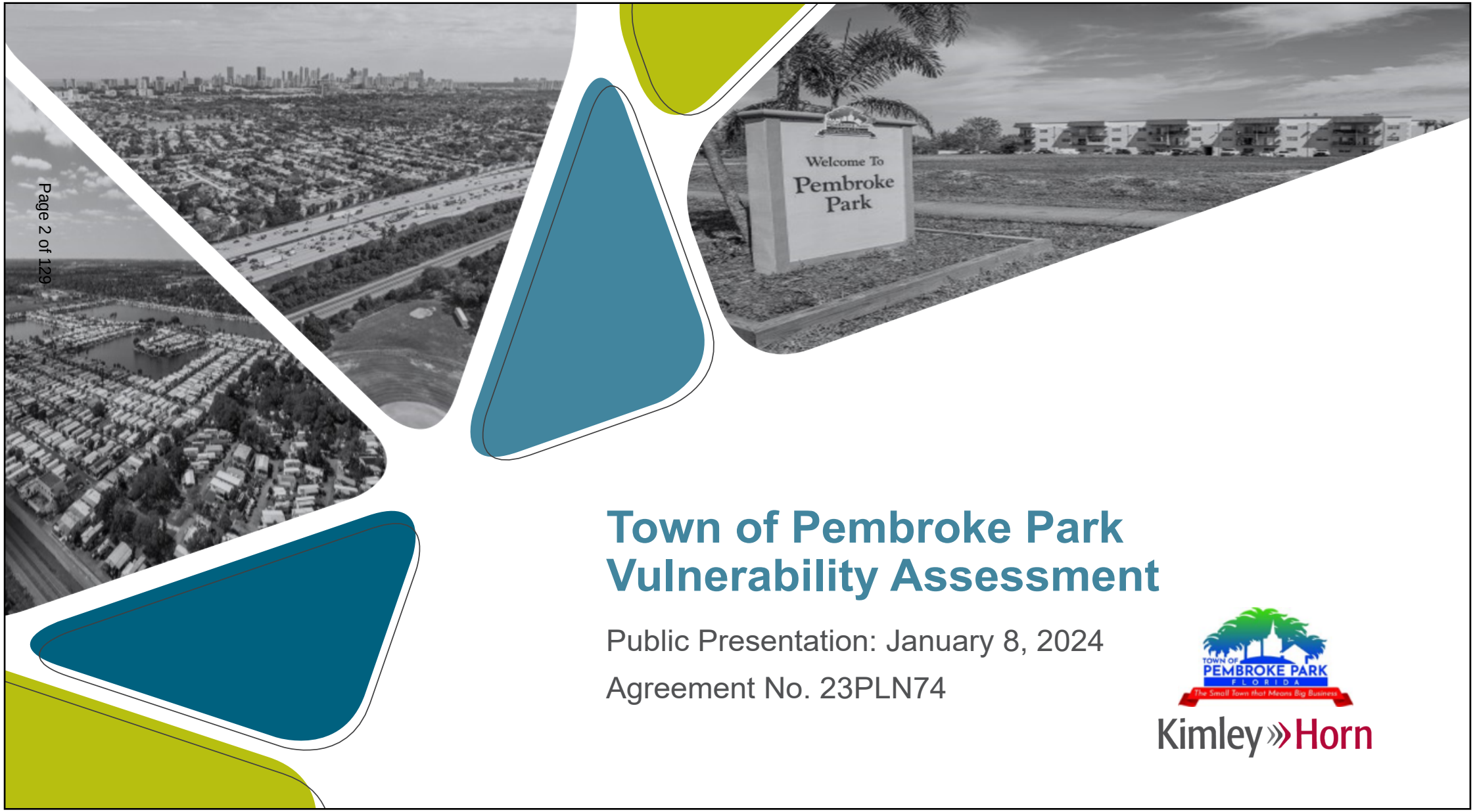
Cynthia Garcia-Lima
Town Clerk

Agenda Item Report

Subject:	Vulnerability Assessment - Kimley-Horn and Associates, Inc.
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Stanley Merantus, Public Services Director
Dept/Group:	Public Works
Recommendation for Counsel to consider:	
Background Information:	Presentation of the Vulnerability Assessment
Staff Recommendations:	
Financial Implications:	There is no financial impact.
Alternatives:	

ATTACHMENTS:

Pembroke Park VA - Workshop Commission Meeting
Pembroke Park_Final Vulnerability Assessment 112024 Update



Town of Pembroke Park Vulnerability Assessment

Public Presentation: January 8, 2024

Agreement No. 23PLN74

TOWN OF PEMBROKE PARK FLORIDA
The Small Town that Means Big Business

Kimley»Horn

Introduction

This project has been collaboratively funded by the Town of Pembroke Park and the Florida Department of Environmental Protection's Resilient Florida Grant Program.

Project Objective

- Conduct a Vulnerability Assessment which identifies flooding risks due to rainfall, storm surge, and sea-level rise in the Town of Pembroke Park.
- Analyze available data to:

Identify Flood Depth for Various Scenarios

Evaluate Flood Severity

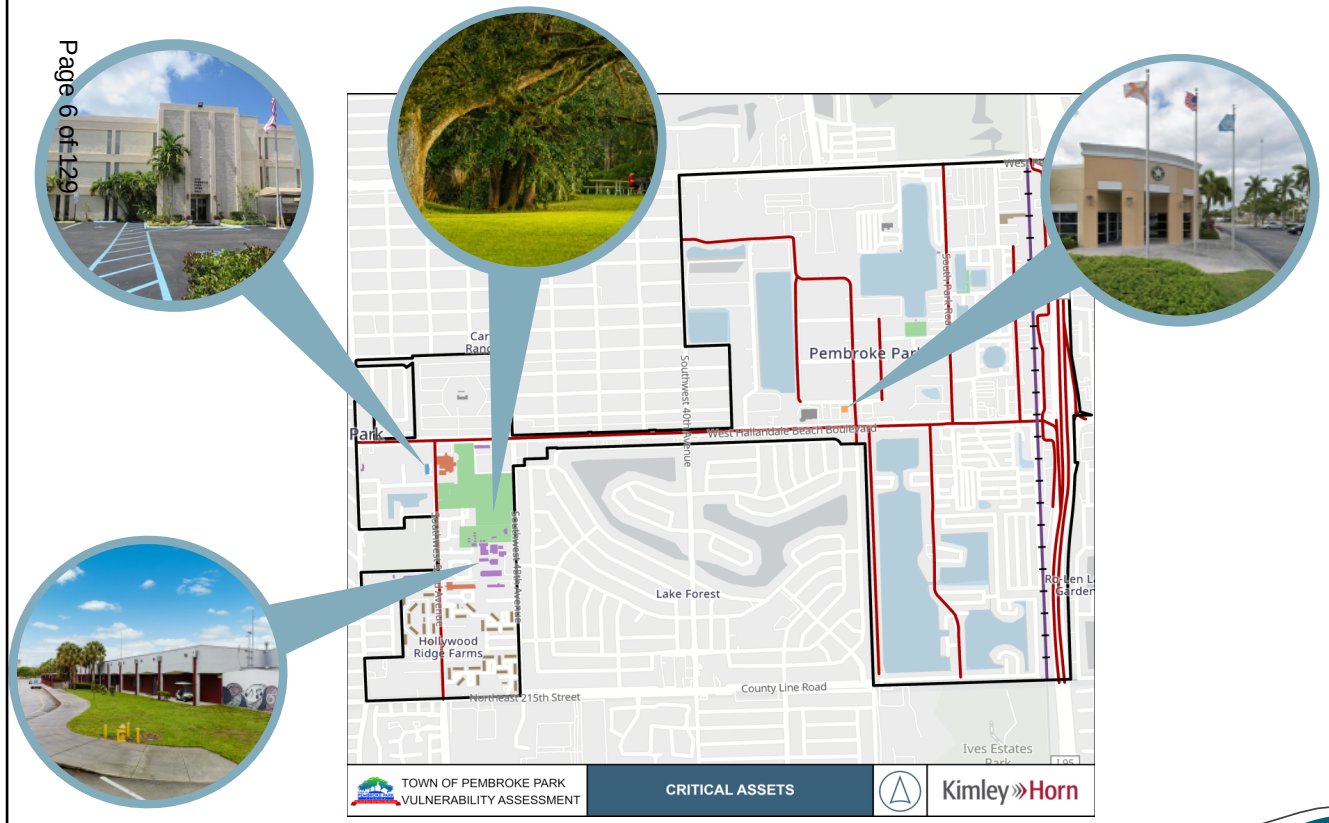
Assign Risk Levels per Scenario

Identify Focus Areas

Summary of Project

1. Data Collection, Review, and Data Gap Analysis
2. Exposure Analysis
3. Sensitivity Analysis
4. Identify Focus Areas
5. Final Vulnerability Assessment Report

Data Collection & Data Gap Analysis



Asset Inventory

- Transportation and Evacuation Routes
- Critical Infrastructure
- Critical Community and Emergency Facilities
- Natural, Cultural, and Historical Assets

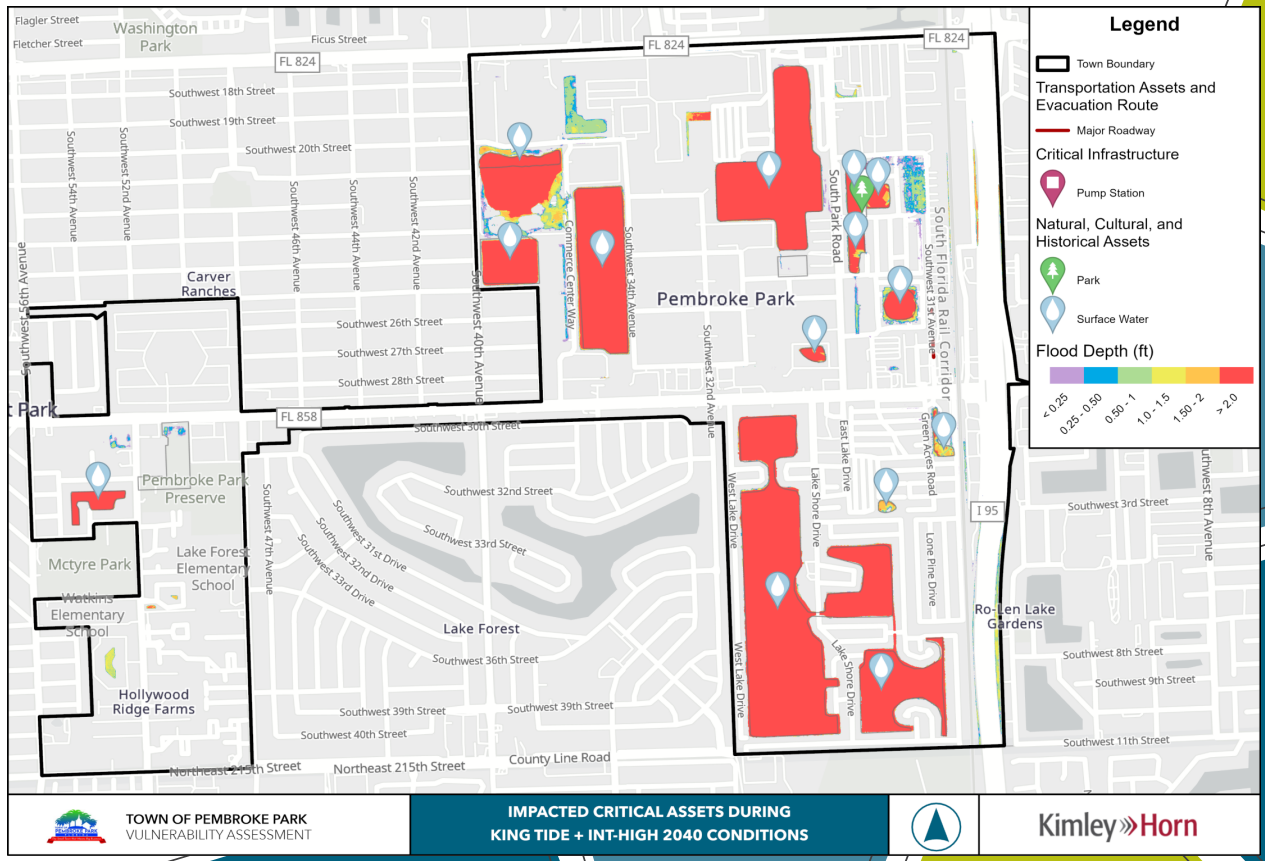
Topographic Data

Flood Scenario Data

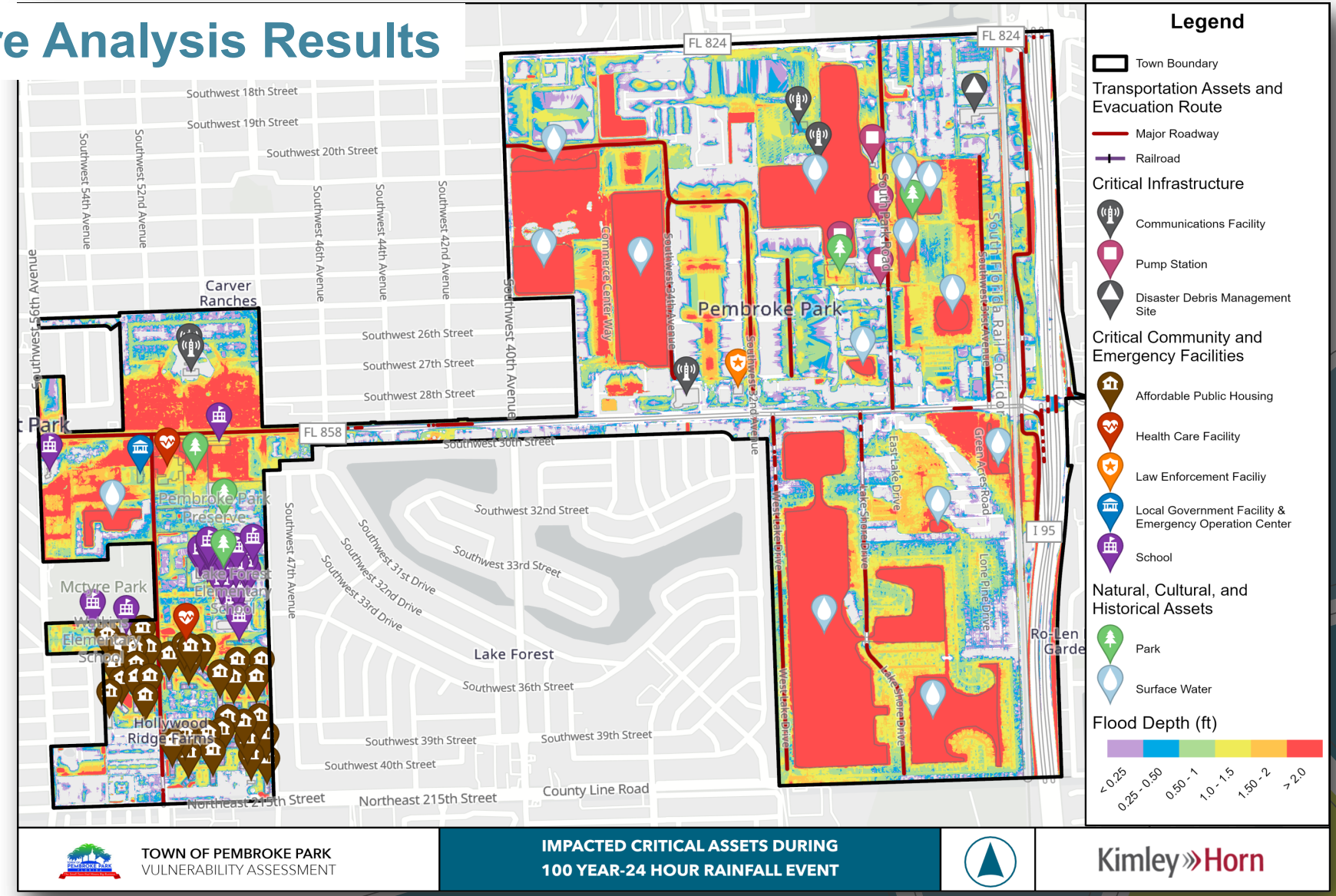
- Rainfall
- Sea Level Rise
- Storm Surge

Exposure Analysis

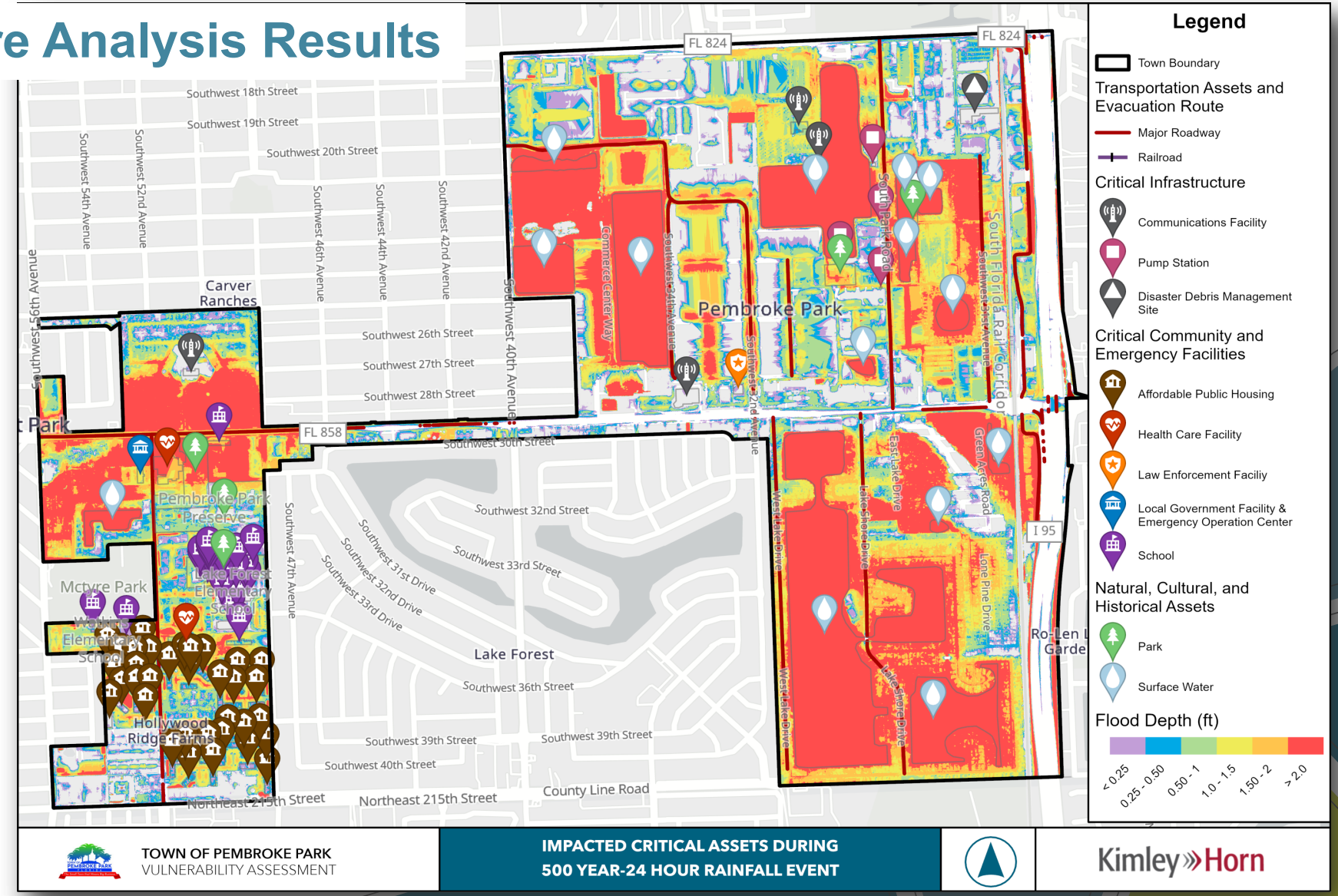
- Tidal Flooding
- Storm Surge
- Rainfall-Induced Flooding



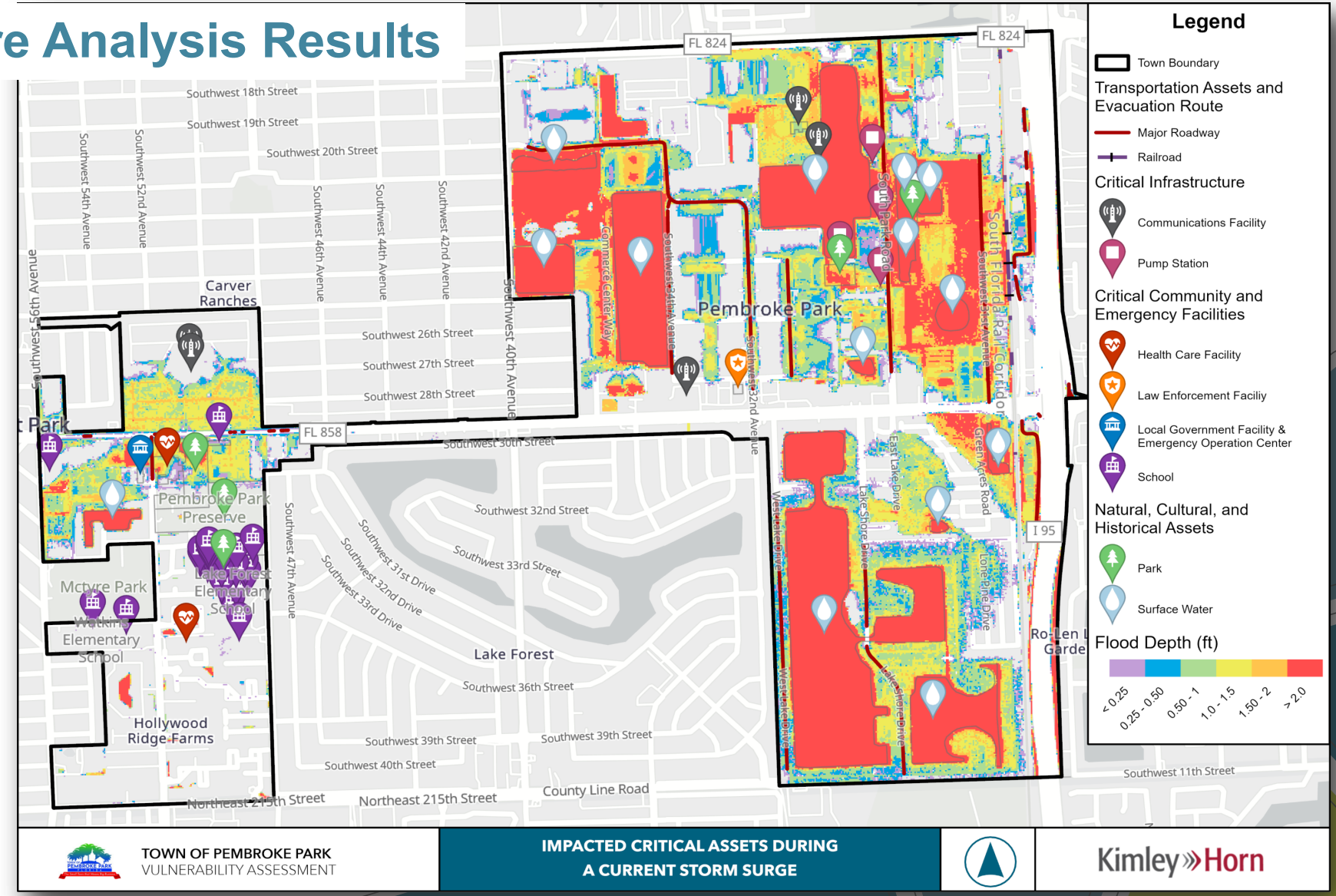
Exposure Analysis Results



Exposure Analysis Results



Exposure Analysis Results



Sensitivity Analysis

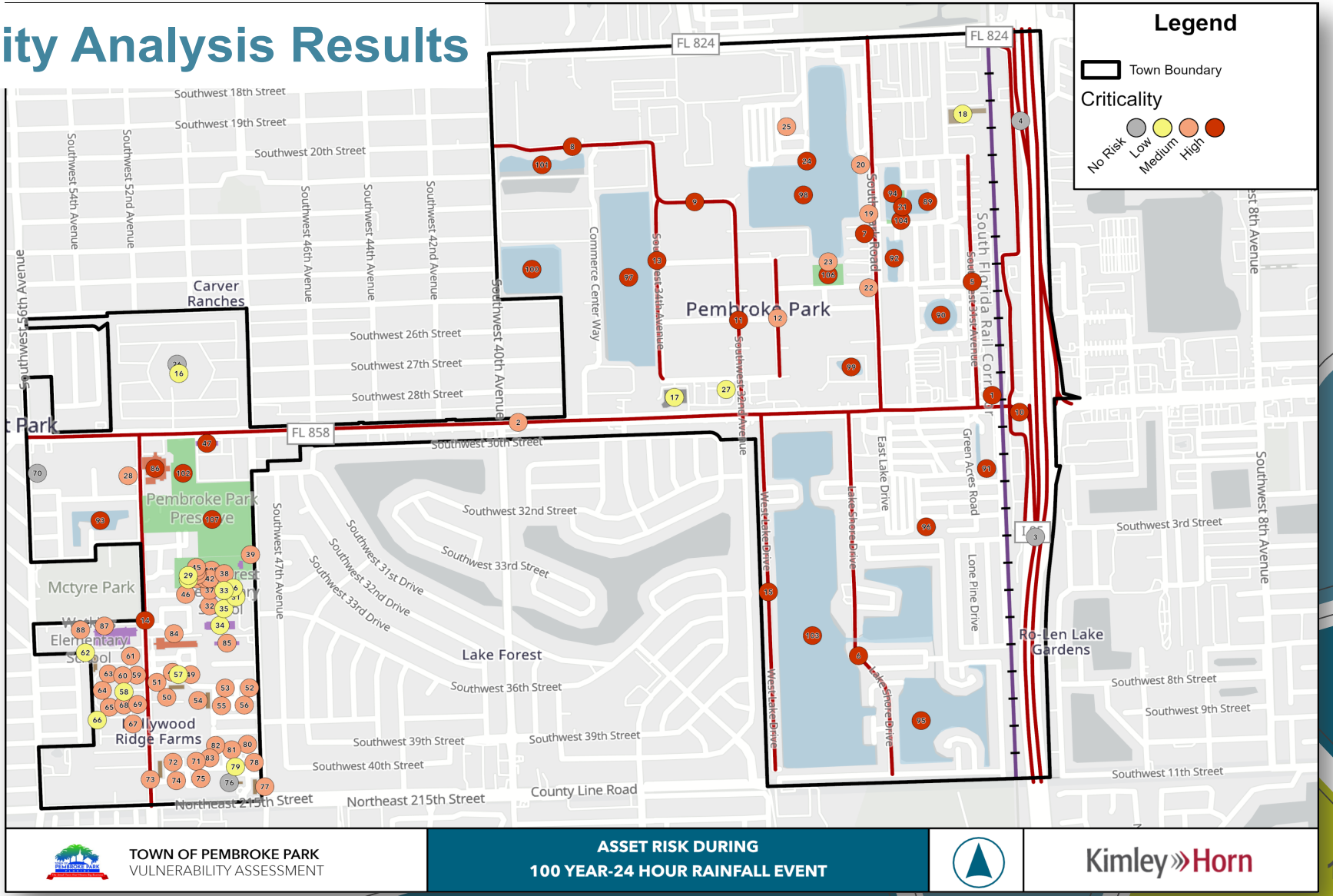
Objective:

Measure the impact of flooding on assets and assign a risk level

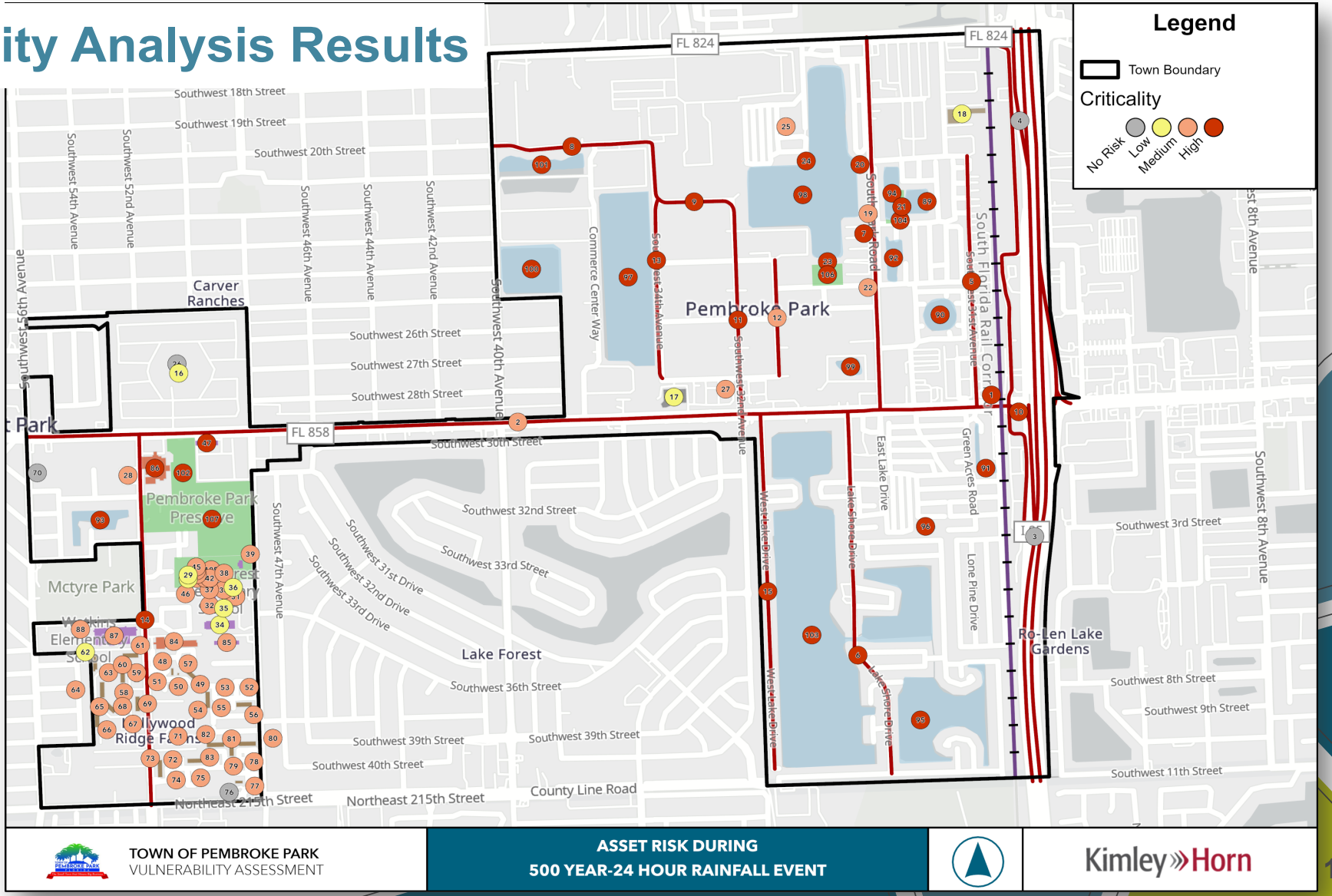
Legend (Critical Infrastructure)	
Low	Flooding < 0.5-ft
Medium	Flood depths greater than 0.5-ft and less than 2-ft
High	Permanent (SLR) flooding, flood depths >2-ft

Asset Name	Scenario Criticality															
	100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE
Communications Facility	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-
Communications Facility	L	L	L	L	L	L	L	L	L	L	-	-	-	-	L	-
Solid and Hazardous Waste Facility, Disaster D	L	L	L	L	L	L	L	L	L	L	-	-	M	L	H	-
Pump Station	M	M	M	M	M	M	M	M	M	M	H	H	H	H	H	-
Pump Station	M	M	M	M	H	H	M	H	H	H	H	H	H	H	H	-
Pump Station	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-
Pump Station	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	-
Pump Station	M	M	M	M	H	H	M	H	H	H	H	H	H	H	H	-
Communications Facility	H	H	H	H	H	H	H	H	H	H	M	M	H	H	H	-
Communications Facility	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	-
Communications Facility	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-

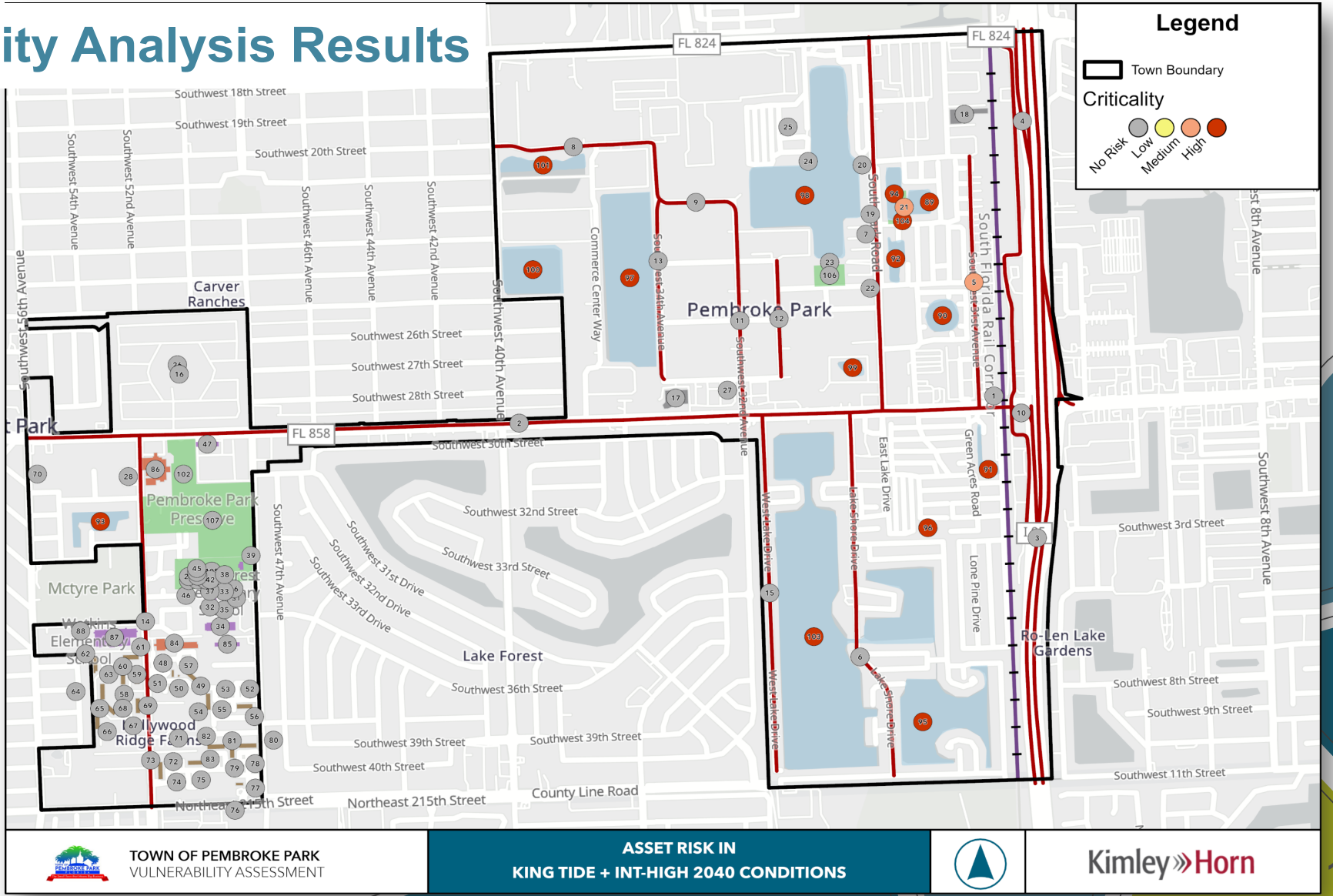
Sensitivity Analysis Results



Sensitivity Analysis Results



Sensitivity Analysis Results



TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

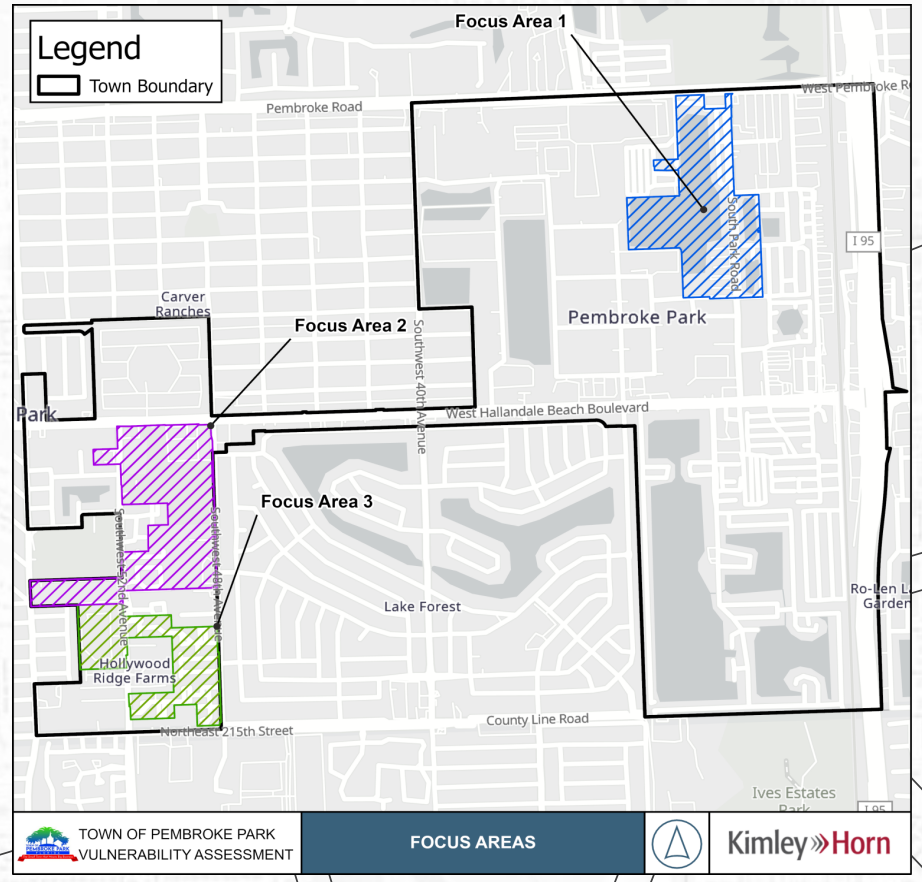
ASSET RISK IN
KING TIDE + INT-HIGH 2040 CONDITIONS

Kimley»Horn

13

Identify Focus Areas

Identify highly vulnerable focus areas within the Town which can benefit from future adaptation strategies.



Adaptation Strategies

Short Term



Deployable Flood Barriers



Dry Floodproofing



Backflow Preventors



Stormwater Maintenance Program Update

Long Term



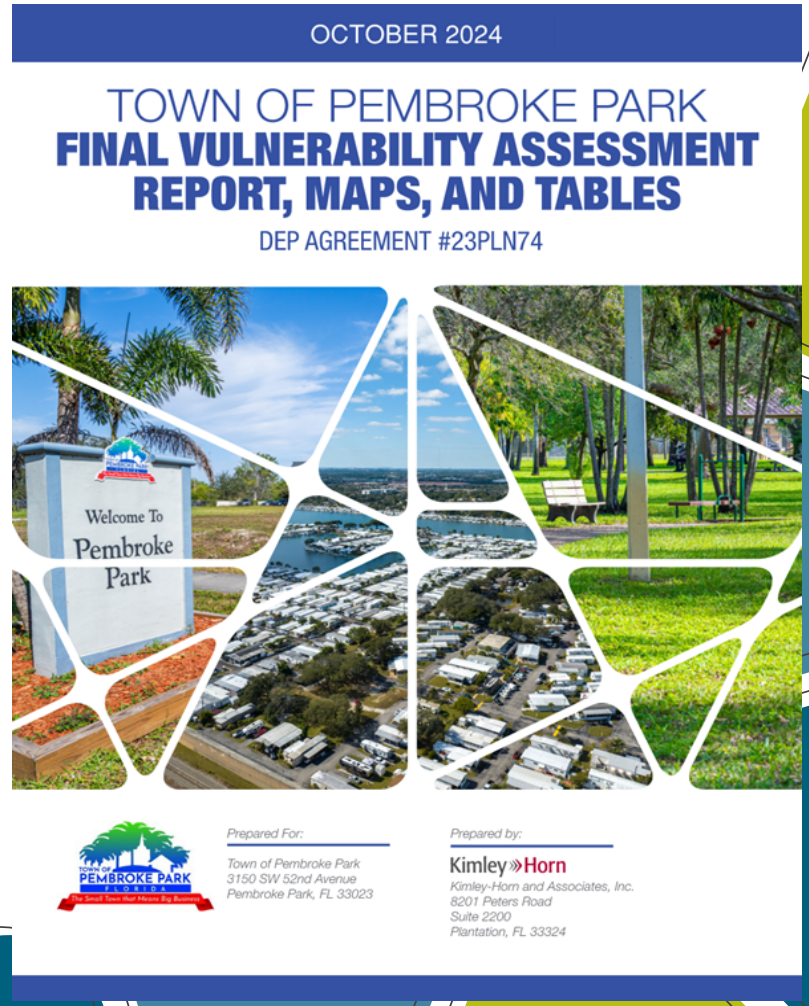
Enhanced Green and Grey Stormwater Infrastructure

Business Case Evaluation

FFE Ordinance

Elevate Infrastructure

Final Vulnerability Assessment





Thank you!

TOWN OF PEMBROKE PARK
FLORIDA
The Small Town that Means Big Business

Kimley»Horn

NOVEMBER 2024

TOWN OF PEMBROKE PARK
FINAL VULNERABILITY ASSESSMENT REPORT, MAPS, AND TABLES

DEP AGREEMENT #23PLN74



Prepared For:

Town of Pembroke Park
3150 SW 52nd Avenue
Pembroke Park, FL 33023

Prepared by:

Kimley»Horn
Kimley-Horn and Associates, Inc.
8201 Peters Road
Suite 2200
Plantation, FL 33324

Revision Date: 11/2024

The Town of Pembroke Park Vulnerability Assessment

Task 6 – Final Vulnerability Assessment

Prepared for:

Town of Pembroke Park
3150 SW 52nd Avenue
Pembroke Park, Florida 33023

Prepared by:

Kimley-Horn and Associates, Inc.
8201 Peters Road, Suite 2200
Plantation, FL 33324

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Registry No. 696

Plantation, Florida 143586004

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November 2024

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November 2024

LIST OF APPENDICES

APPENDIX A – Kick Off Meeting Minutes
APPENDIX B – Data Collection Technical Memorandum
APPENDIX C – FEMA Firm Panels
APPENDIX D – Exposure Analysis Inundation Maps
APPENDIX E – Sensitivity Analysis Paired Asset-Threat Matrices
APPENDIX F – Sensitivity Analysis Paired Asset-Threat Maps

ABBREVIATIONS

BFE	Base Flood Elevations
DEM	Digital Elevation Model
FDEM	Florida Department of Emergency Management
FDEP	Florida Department of Environmental Protection
FEMA	Federal Emergency Management Agency
FFE	Finished Floor Elevation
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
F.S.	Florida Statute
IH	Intermediate-High
IL	Intermediate-Low
LiDAR	Light Detection and Ranging
MEOW	Maximum of the Maximum Envelope
MHHW	Mean Higher High Water
MOM	Maximum of Maximum
NAVD 88	North American Vertical Datum of 1988
NOAA	National Oceanographic and Atmospheric Administration
NWS	National Weather Service
SFWMD	South Florida Water Management District
SLR	Sea Level Rise
SLOSH	Sea, Lake, and Overland Surges from Hurricanes
SLS	Sea Level Scenario
USACE	U.S. Army Corps of Engineers

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1. PROJECT BACKGROUND

Kimley-Horn was retained under an Agreement for Continuing Consulting Engineering Services for the Town of Pembroke Park Vulnerability Assessment Study on November 17, 2023. Pursuant to F.S. 380.093, a Vulnerability Assessment for critical infrastructure and community assets in the Town of Pembroke Park (hereinafter referred to as "Town") was completed to ultimately prepare a comprehensive Town-wide flood vulnerability and sea level rise assessment to address risk of impacts from sea level rise (SLR), storm surge, and rainfall-induced flooding.

The Town of Pembroke Park received funding from the Florida Department of Environmental Protection through the Resilient Florida Program to conduct a Townwide Vulnerability Assessment. The objective of the Town of Pembroke Park Vulnerability Assessment Project is to identify critical assets as classified in s. 390.093(2) 1-4, F.S. and assess risk of flooding and sea level rise within the Town and specify the scenarios in which these areas are vulnerable.

This project was made possible through grant funding provided by the Florida Department of Environmental Protection (FDEP) Resilient Coastlines Program. This draft vulnerability assessment report provides a summary of all tasks completed for this vulnerability assessment.

2. GOALS AND OBJECTIVES

The main objections of this study were:

- To conduct a vulnerability assessment pursuant to s. 380.093, F.S.
- To present a list of critical and regionally significant assets impacted by each flood scenario ranked by risk.
- To provide all electronic mapping data used to illustrate flooding and sea level rise impacts identified in the VA.
- To provide a signed Vulnerability Assessment Compliance Checklist Certification.

3. TOWN OF PEMBROKE PARK BACKGROUND INFORMATION

The Town of Pembroke Park is an intercoastal municipality located in southeast Broward County, Florida, approximately 1.7 square miles in area. The Town is bounded by I-95 to the east, the Town of Ives Estates Park to the south, the City of Hollywood to the North, and the City of West Park to the west. The estimated population is 6,240 residents per the July 1, 2022, United States Census Bureau.

Coastal proximity, low-lying topography and a high groundwater table make the Town vulnerable to the impacts of SLR, storm surge, extreme weather, and other flooding shocks and stressors. These impacts tax the Town's built and natural environments and require a concerted approach to devise an actionable resilience plan that sustains the quality of life, aligns policies and programs, balances life-cycle costs, and ultimately adapts to change. The Vulnerability Assessment presented in this report is one part of the overall path to resilience planning.

Figure 1 shows the project location map for the Town of Pembroke Park Vulnerability Assessment.

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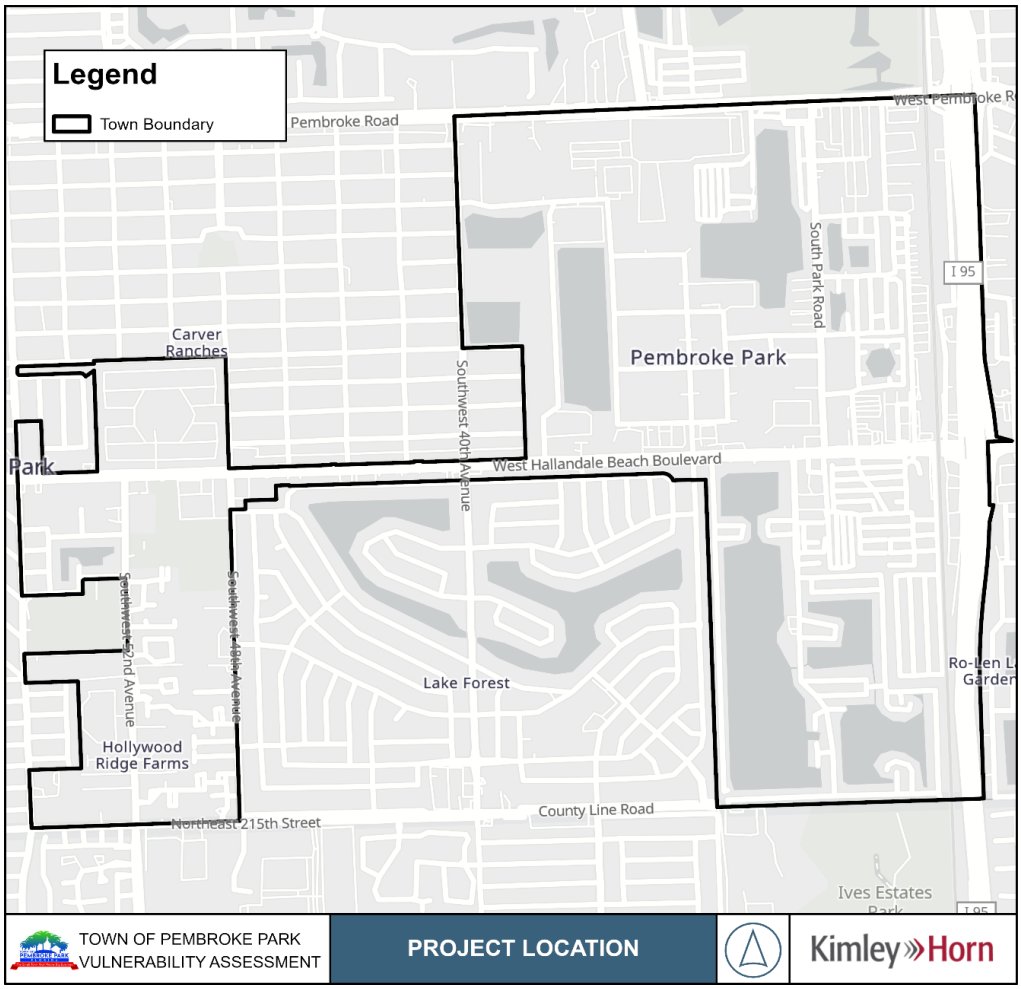

FIGURE 1: PROJECT LOCATION MAP

U.S. CENSUS DATA

The demographics of the Town of Pembroke Park can be comprehensively outlined in this section, encompassing a wide range of data related to various aspects of the community. This includes detailed information about the population size and distribution, elderly population, housing characteristics, and economic factors such as employment and income levels that contribute to a deeper understanding of the Town's overall profile. A sample of this data is provided below in **Figure 2.**

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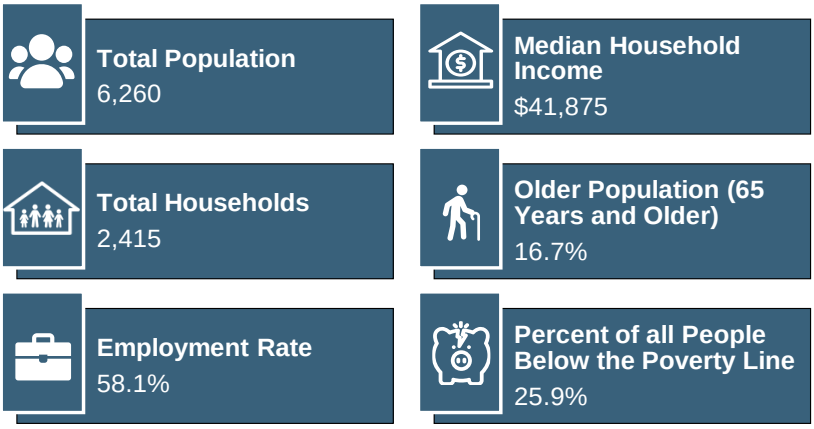

FIGURE 2. U.S. CENSUS DEMOGRAPHICS DATA

4. METHODOLOGY

This study methodology follows a six-step process following state guidelines as summarized in **Table 1**. The focus of steps 1 to 6 was to acquire background data, take inventory of critical and regionally significant assets, conduct an exposure analysis, conduct a sensitivity analysis, and provide a final vulnerability assessment.

TABLE 1: METHODOLOGY STEPS

Task	Description
Task 1	Kick-Off Meeting and Project Management
Task 2	Acquire Background Data
Task 3	Critical and Regionally Significant Asset Inventory
Task 4	Exposure Analysis
Task 5	Sensitivity Analysis
Task 6	Final Vulnerability Assessment Report, Maps, and Tables

TASK 1 – KICK-OFF MEETING

The first step in this project included a kick-off meeting held on January 11, 2024, during which the team members were introduced, and project goals, objectives, and schedule were discussed.

During the kick-off meeting, project stakeholders and their role in the project were identified. A formal steering committee was not assembled for this vulnerability assessment. The meeting minutes from the project kick-off meeting are included in **APPENDIX A**.

TASK 2 & 3 – BACKGROUND DATA AND CRITICAL ASSET INVENTORY

The following data was compiled for use in this vulnerability assessment:

- 2018 USDA NRCS/USGS Southeast Florida 1-m DEM
- FEMA Flood Insurance Rate Maps (FIRMs)
- NOAA Atlas 14 Rainfall Data

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- NOAA Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model
- Southeast FL Regional Climate Change Compact Unified SLR Projections Guidance Report
- NOAA 2017 SLR Projections
- NOAA Tides and Gauges Data
- Critical Asset Inventory

The data collection technical memorandum containing a log of all data collected for this task and their sources can be found in **APPENDIX B.**

DIGITAL ELEVATION MODEL (DEM)

The 2018 U.S. Department of Agriculture National Resource Conservation Service (USDA NRCS)/ U.S. Geological Survey (USGS) Southeast Florida dataset was used as the basis of terrain for this vulnerability assessment. All elevations are relative to vertical datum NAVD 88. All conversions of data from NGVD29 to NAVD88 reported in this project were standardized at a difference of 1.6-feet. No changes in topography required rectification in this analysis.

The study area contains a ridge along I-95 with a peak elevation of approximately 30-feet. Elevations within the Town's boundary are generally the highest in the southwest region, containing Lake Forest Elementary School, with a peak elevation of approximately 9.0-feet, and Watkins Elementary School, with a peak elevation of approximately 8.5-feet.

Relative lows exist around all surface waters ranging in elevation from 3.0-feet to 7.0-feet.

Figure 3 shows the Digital Elevation Map for the Town.

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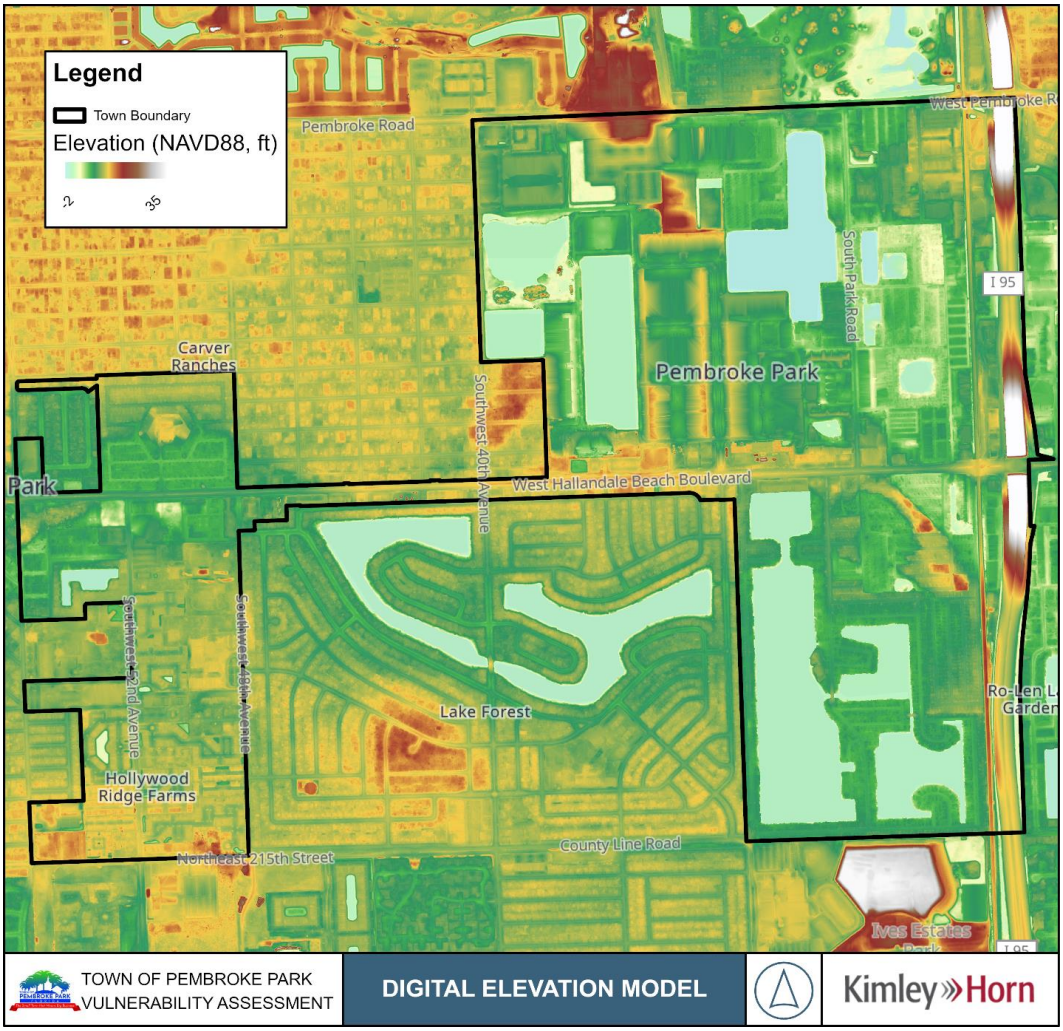

FIGURE 3: ELEVATION IN PEMBROKE PARK

NOAA ATLAS RAINFALL DATA

The 100-year, 24-hour and 500-year, 24-hour rainfall events were collected from the NOAA Atlas 14 tool. Table 2 shows the rainfall depths evaluated in this analysis.

TABLE 2: NOAA ATLAS 14 RAINFALL DEPTHS

Rainfall Event	Rainfall Depth (in)
100-year, 24-hour	15.4
500-year, 24-hour	21.1

SEA LEVEL RISE DATA

Per s. 380.093, F.S., SLR vulnerability assessments must include the 2017 NOAA SLR intermediate-low and intermediate-high projections for the years 2040 and 2070 as modeled scenarios. The 2017 NOAA SLR projections were pulled from the Miami Beach and Virginia Key gauges. Upon review of both gauges, it was determined that the reported SLR projections were the same for all SLR scenarios

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included in this assessment. The 2017 NOAA SLR intermediate-low projections were ultimately pulled from the Miami Beach gauge, the closest gauge with SLR data to Pembroke Park, with approval from FDEP. **Figure 4** shows the 2017 NOAA SLR projection data collected from the Miami Beach gauge.

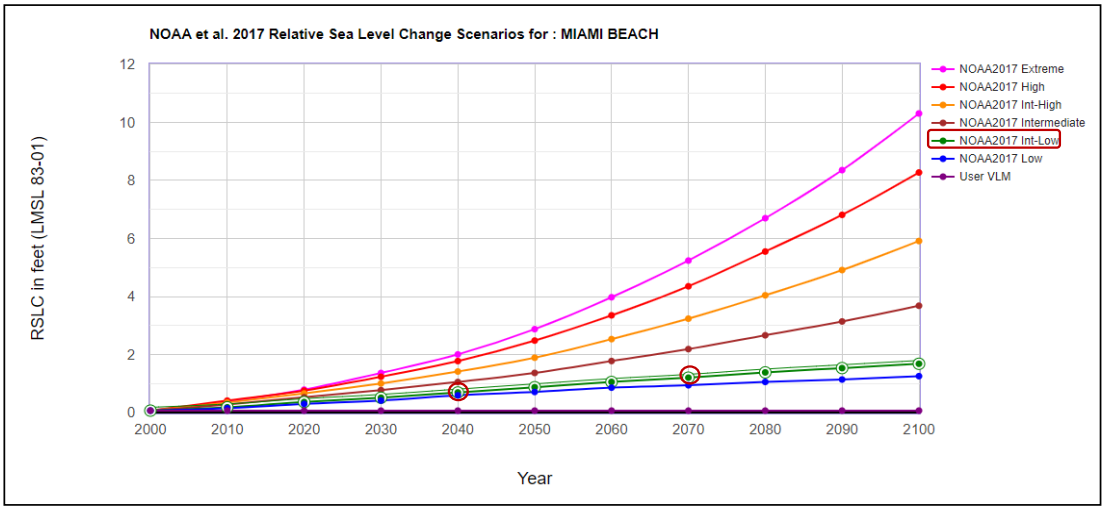

FIGURE 4: NOAA 2017 INTERMEDIATE-LOW SLR PROJECTION USED (CIRCLED IN RED)

In 2019, the Southeast Florida Regional Climate Change Compact (SEFRCCC) released an update of the Unified SLR Projections Guidance Report which summarizes observed SLR trends and recommended regional SLR projections through the year 2120. This update was intended to support local governments and regional entities in the development of science-based adaptation strategies, policies, and infrastructure design. The Guidance Report discusses three curves for application: the NOAA High Curve, the NOAA Intermediate High Curve, and the curve corresponding to the median of the Intergovernmental Panel on Climate Change (IPCC). The IPCC median curve is recommended for short-term, flexible projects with low risk and limited connections to other infrastructure. For projects ending before 2070, it is advised to consider values along the NOAA Intermediate-High curve and thus, were used for this analysis.

While the High SLR projections were not included in this vulnerability assessment, it is suggested that these conditions be evaluated prior to the design phase of any project to evaluate the effectiveness and assumed planning horizon of any adaptive infrastructure.

The SLR projection data used in this vulnerability assessment are outlined in **Table 3**.

TABLE 3: SLR DATA

Scenario	Data Source	Projected Elevation (NAVD88, ft)
Intermediate-Low 2040 (IL2040)	2017 NOAA SLR Projections	0.76
Intermediate-High 2040 (IH2040)	SERFCCC Unified SLR Projections Guidance	1.38
Intermediate-Low 2070 (IL2070)	2017 NOAA SLR Projections	1.31
Intermediate-High 2070 (IH2070)	SERFCCC Unified SLR Projections Guidance	3.31

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NOAA TIDES AND CURRENTS GAUGE DATA

Tidal flooding data, such as mean higher high water (MHHW) and flood thresholds, were collected from the NOAA Tides and Currents database and published National Weather Service flooding thresholds. NOAA has determined three coastal flood severity levels, informed by years of monitoring tide gauge data. Variations in flood thresholds exist among NOAA tide gauges due to differences in infrastructure vulnerabilities influenced by factors like topography, land cover, and flood defenses. A flood threshold of 1.74 feet above MHHW is identified by NOAA as the minor flood threshold at the closest tide gauge to the Town (Virginia Key, Biscayne Bay, FL station). Using the MHHW elevation and the NOAA minor flood threshold value, the value of 2.31 feet NAVD88 was used to assess the vulnerability to the current King Tide scenario.

Table 4 shows the current tidal flooding elevation in Pembroke Park.

TABLE 4: TIDAL FLOODING DATA

Scenario	Elevation (NAVD88, ft)
Current Tidal Flooding Threshold	1.74
Mean Higher High Water (MHHW)	0.57

STORM SURGE DATA

Storm surge data was sourced from the National Hurricane Center's Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model. The data collected is the maximum of the maximum envelope of high water (MEOW), or (MOM), which provides a worst-case scenario for each category storm under "perfect" storm conditions. A Category Five – High water surface elevation of 6.70 feet NAVD88 was obtained for this assessment.

Table 5 shows the current storm surge elevation in the Town on Pembroke Park.

TABLE 5: STORM SURGE SCENARIOS

Scenario	Surge Elevation (NAVD88, ft)
Current Storm Surge – Category Five	6.70

CRITICAL ASSETS INVENTORY

An integral part of the vulnerability assessment was identifying, locating, and categorizing Town assets that may be exposed to threats due to flooding hazards. Asset data was collected using the Broward County GeoHub GIS portal and additional data was provided by the Town. A list of all inventoried Town assets evaluated as a part of this vulnerability assessment is provided in **Table 6**. This inventory is organized by asset category as defined in s. 380.093, F.S. and only includes assets that are owned or maintained by Pembroke Park.

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TABLE 6: TOWN CRITICAL ASSETS

Asset Category	Asset Type	Quantity
Transportation Assets and Evacuation Routes	Major Roadways	14
	Rail Facilities	1
Critical Infrastructure	Stormwater Treatment Facilities (Pump Stations)	5
	Communication Facilities	5
	Solid and Hazardous Waste Facilities	1
	Affordable Public Housing	35
Critical Community and Emergency Facilities	Schools (including all facilities)	23
	Health Care Facilities	2
	Law Enforcement Facilities	1
	Local Government Facilities	1
Natural, Cultural, and Historic Resources	Parks	5
	Surface Waters	14

TASK 4 – EXPOSURE ANALYSIS

An exposure analysis was performed to assess the extent of flooding experienced by an asset due to various flooding scenarios in present-day and projected to occur in the future including rainfall, sea level rise, and storm surge. The following sections outline the methodology used to perform the exposure analysis for the Town of Pembroke Park.

APPENDIX D contains the inundation maps for all flooding scenarios evaluated in the exposure analysis.

All evaluated scenarios in this analysis and the baseline flood elevation associated with each scenario are outlined below.

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TABLE 7. SCENARIOS EVALUATED WITH ASSOCIATED BASELINE FLOOD ELEVATION

Scenario	Baseline Flood Elevation (ft)
100-year, 24-hour	-
Projected Rainfall – 100-year, 24-hour + SLRIL2040	0.76
Projected Rainfall – 100-year, 24-hour + SLRIH2040	1.38
Projected Rainfall – 100-year, 24-hour + SLRIL2070	1.31
Projected Rainfall – 100-year, 24-hour + SLRIH2070	3.31
500-year, 24-hour	-
Projected Rainfall – 500-year, 24-hour + SLRIL2040	0.76
Projected Rainfall – 500-year, 24-hour + SLRIH2040	1.38
Projected Rainfall – 500-year, 24-hour + SLRIL2070	1.31
Projected Rainfall – 500-year, 24-hour + SLRIH2070	3.31
Current King Tide Conditions with NOAA Minor Flood Threshold	2.31
Future King Tidal Flooding with IL2040	3.07
Future King Tidal Flooding with IH2040	3.69
Future King Tidal Flooding with IL2070	3.62
Future King Tidal Flooding with IH2070	5.62
Current Storm Surge	6.70
Storm Surge with SLRIL2040	7.46
Storm Surge with SLRIH2040	8.08
Storm Surge with SLRIL2070	8.01
Storm Surge with SLRIH2070	10.01
Compound Flooding – 100-year, 24-hour + Current King Tide Conditions with NOAA Minor Flood Threshold	2.31
Compound Flooding – 100-year, 24-hour + Future King Tidal Flooding with IL2040	3.07
Compound Flooding – 100-year, 24-hour + Future King Tidal Flooding with IH2040	3.69
Compound Flooding – 100-year, 24-hour + Future King Tidal Flooding with IL2070	3.62
Compound Flooding – 100-year, 24-hour + Future King Tidal Flooding with IL2070	5.62

RAINFALL-INDUCED FLOODING

Rainfall-induced flooding maps were generated using rapid inundation modeling. This technology works by routing water over the terrain for the duration of a specified storm event using a set of rules based on water level response to topography and existing water levels. This analysis did not consider stormwater infrastructure (i.e., pipes) or infiltration and because of this, results as presented may be overstated. It is important to note that while all models used in this analysis show the extents of inundation due to low elevation, the rapid inundation model also identifies area where standing water may occur due to *relatively* low elevation (areas bounded by ridges) in a given region.

The 100-year,24-hour and 500-year,24-hour-rainfall events were modelled to evaluate potential rainfall-induced flooding within the study area. This analysis was based on data collected from the NOAA Atlas 14 tool and is consistent with guidelines set forth in s. 380.093 F.S. for this evaluation. **Table 8** shows the rainfall data used to generate the flood extents of the rainfall scenarios.

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TABLE 8: RAINFALL-INDUCED FLOODING EVENTS

Rainfall Event	Rainfall Depth (in)
100-year, 24-hour	15.4
500-year, 24-hour	21.1

Within the results of the rainfall-induced flooding scenarios, the following areas experienced higher flood depths due to being at the lowest elevation relative to their surroundings:

- Northwest region of the Town, including some residential streets, Mimi's Learning Center, and The Peninsula Assisted Living & Memory Care
- Northeastern region of the Town, east South Park Road
- Region around Desoto Lakes and neighboring residential properties and roadways

Figure 5 shows the extents of flooding in the 500-year, 24-hour storm event.

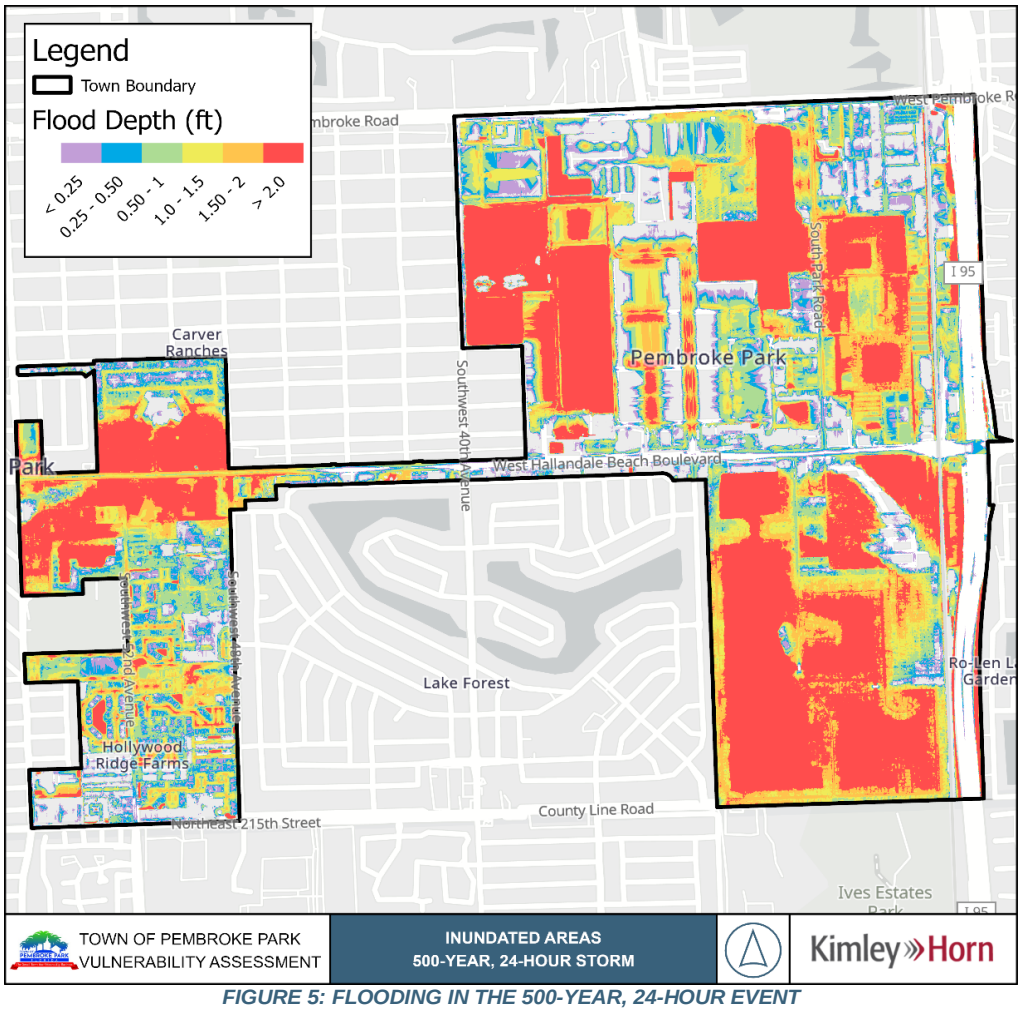

FIGURE 5: FLOODING IN THE 500-YEAR, 24-HOUR EVENT

In the rainfall-induced scenarios, all critical assets experience Low to High Flood Exposure. In the 100-year and 500-year, 24-hour storm event, all parks and surface waters in the Town were exposed to

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flooding, a low percentage of community and emergency facilities experienced flooding, and a medium percentage of critical infrastructure were impacted. A medium and high percentage of transportation assets and evacuation routes were exposed to rainfall-induced flooding in the 100-year and 500-year, 24-hour storm event, respectively. Please refer to **Table 10-Table 13 and APPENDIX D** for the results of the exposure analysis as it relates to critical assets.

Projected Rainfall-Induced Flooding with SLR

Projected rainfall-induced flooding inundation extents were evaluated using data collected for the 100- and 500-year, 24-hour Rainfall and SLR scenarios. Results of the projected rainfall flooding indicate significant flooding within the municipal boundary throughout the whole Town, with highest flooding being on the eastern side of the Town's area. The regions of Pembroke Park impacted by the projected rainfall and SLR scenarios are similar to the current rainfall scenarios with increased flood depths. More specifically, the areas impacted by both compound rainfall and SLR can be described as

- Northeast region between W Hallandale Beach Blvd and north limits of Town
- Southeast region of Town including Desoto Lakes and major roadways
- Western region of Town including W Hallandale Beach Blvd, public schools, major roadways, and affordable public housing

Flooding may not occur in these areas if appropriate stormwater infrastructure exists to properly route the water away from these areas.

Figure 6 shows the extents of the projected 100-year, 24-hour rainfall, and Intermediate-High 2040 flooding scenario.

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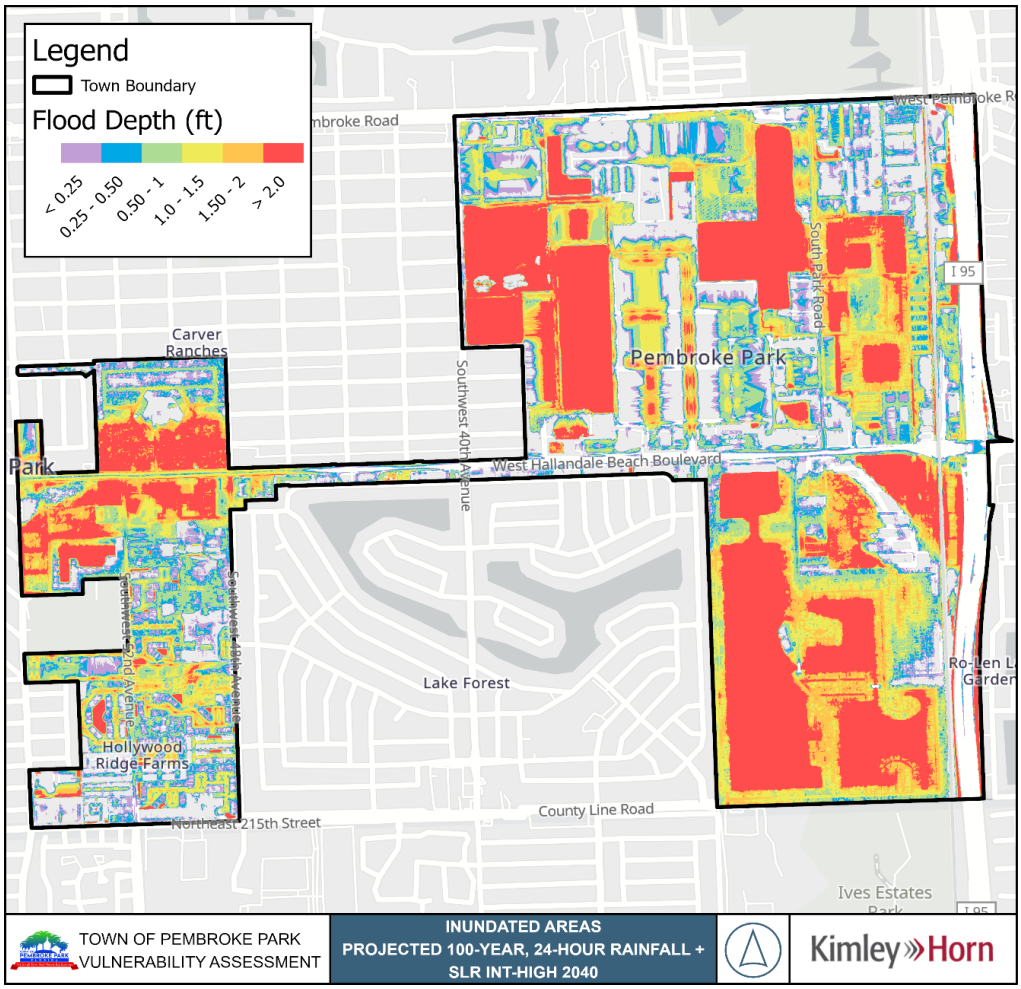

FIGURE 6: FLOODING IN THE FUTURE RAINFALL / INT-HIGH 2040 COMPOUND SCENARIO

In the compound scenarios of rainfall and sea level rise, all critical community and emergency facilities were found to be resilient. A low to medium percentage of transportation assets and natural, cultural, and historical assets were found to be exposed in all compound rainfall and SLR flooding scenarios, with the exception of the Intermediate-High 2070 scenario which found a high percentage of natural, cultural, and historical exposed. For detailed critical asset exposure of each compound scenario, refer to **Table 10-Table 13 and APPENDIX D**.

TIDAL FLOODING

Tidal inundation extents were generated using a bathtub modelling technique. This analysis did not consider stormwater infrastructure (i.e., pipes) or infiltration and because of this, results as presented may be overstated.

The results of the current tidal flooding evaluations show that there are limited tidal flooding impacts to the Town as seen in **Figure 7**. All transportation assets and evacuation routes, critical infrastructure,

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and critical community and emergency facilities were found to be resilient to current tidal flooding conditions. A majority of parks and surface waters were exposed in current tidal conditions.

Refer to **Table 10-Table 13 and APPENDIX D** for results as it relates to critical assets.

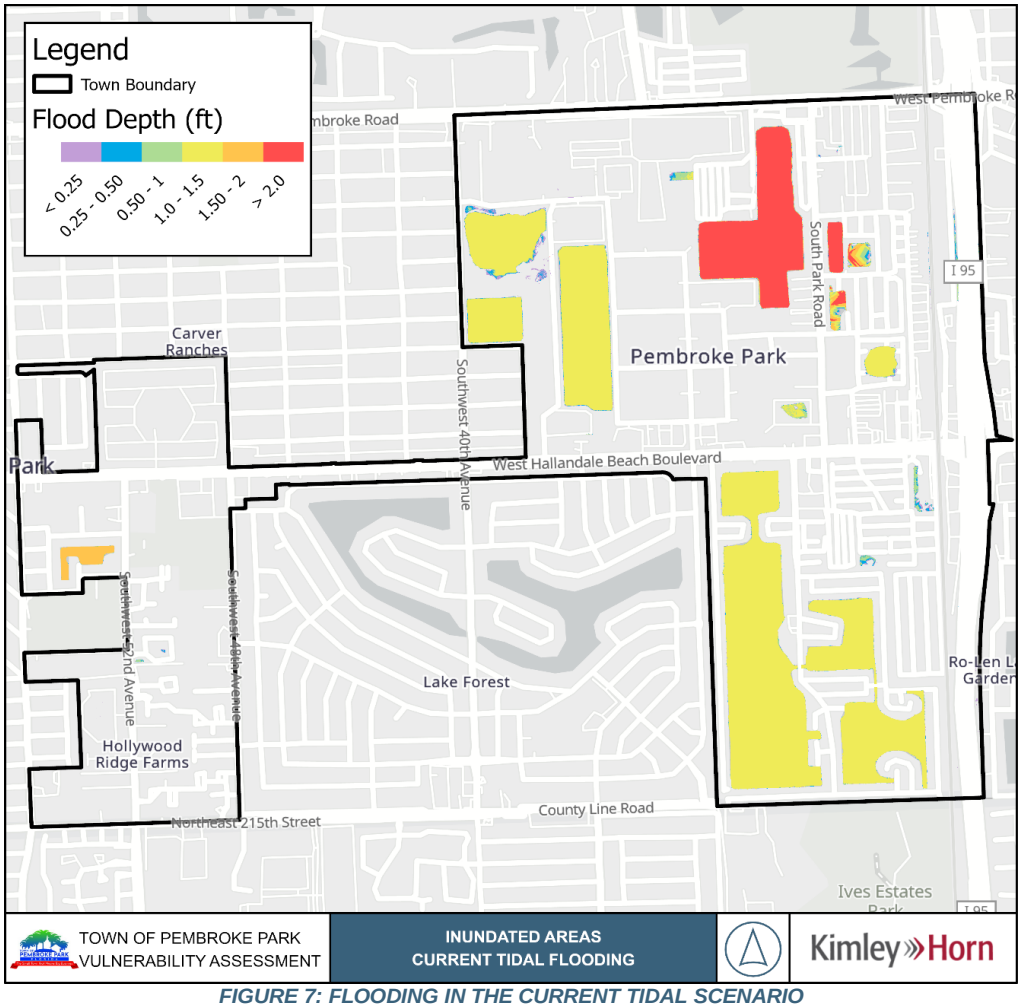

FIGURE 7: FLOODING IN THE CURRENT TIDAL SCENARIO

Future King Tidal Flooding

Results of the future high tide flooding analysis indicate moderate flooding within the municipal boundary in localized areas. The regions of Pembroke Park impacted by future tidal flooding are similar to the current tidal flooding scenario and include:

- Areas surrounding all surface waters
- Northeast region of Town including surface waters, segments of major roadways, and pump stations

Figure 8 shows the future tidal flooding extents for the Intermediate-High 2070 SLR scenario.

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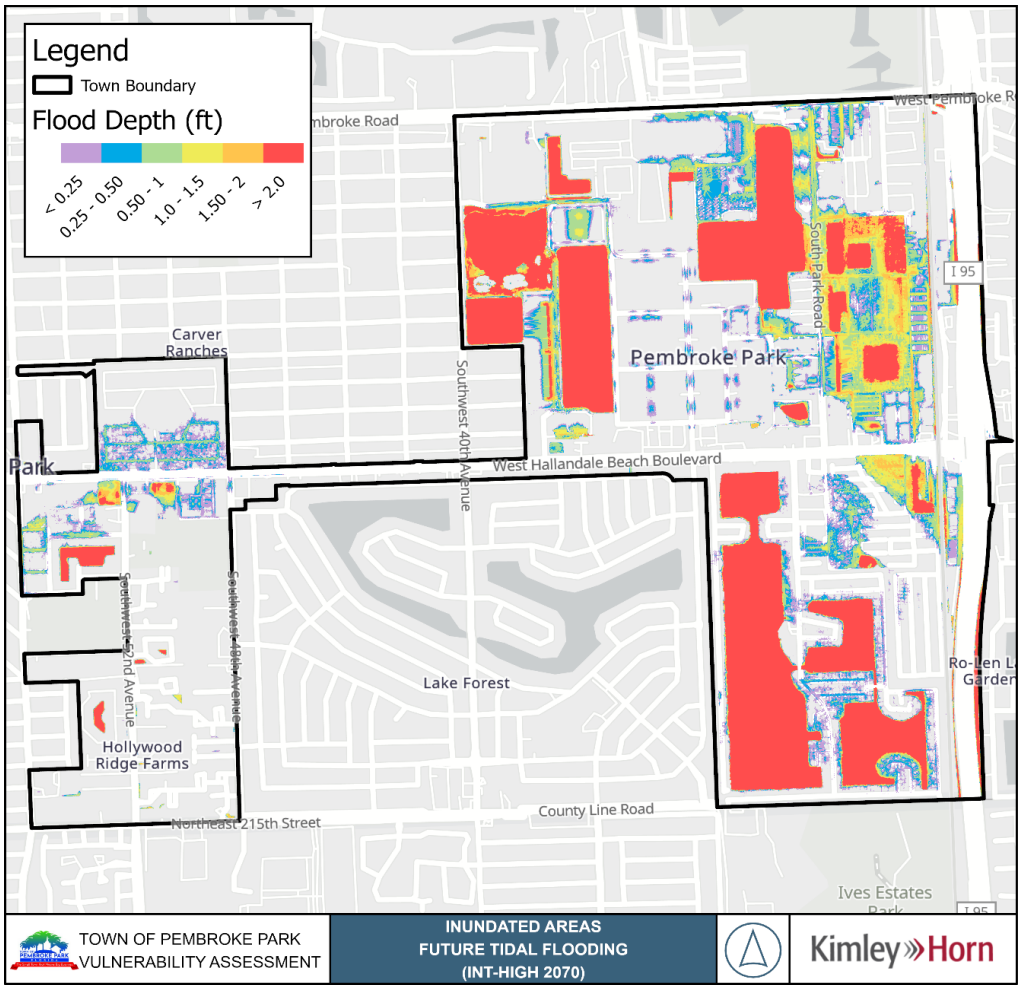

FIGURE 8: FLOODING IN THE FUTURE HIGH TIDE INT-HIGH 2070 SCENARIO

In almost all future tidal scenarios, all critical community and emergency facilities experienced zero exposure, the exception being the Intermediate-High 2070 event where a medium percentage of assets were exposed. A range of low to high percentage of transportation, natural, and critical infrastructure assets were exposed in all projected tidal scenarios as a result of proximity to surface waters and localized topography. For a detailed exposure percentage by critical asset type, refer to **Table 10-Table 13 and APPENDIX D**.

STORM SURGE FLOODING

Current storm surge inundation extents were generated using a bathtub modelling technique. The analysis did not consider stormwater infrastructure (i.e., pipes) or infiltration and because of this, results as presented may be overstated. It should be noted that storm surge modelling for this analysis did not include wave propagation or wind speeds.

Results of the current storm surge scenario show flooding in the following areas and can be also seen in **Figure 9.**

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- All areas surrounding surface waters of which include pump stations
- Patrick Behan Park and Howard Clark Sr. Linear Trail
- Surrounding areas of Desoto Lakes
- Northwest region of Town including Mimi's Learning Center, W Hallandale Beach Blvd, and Town Hall

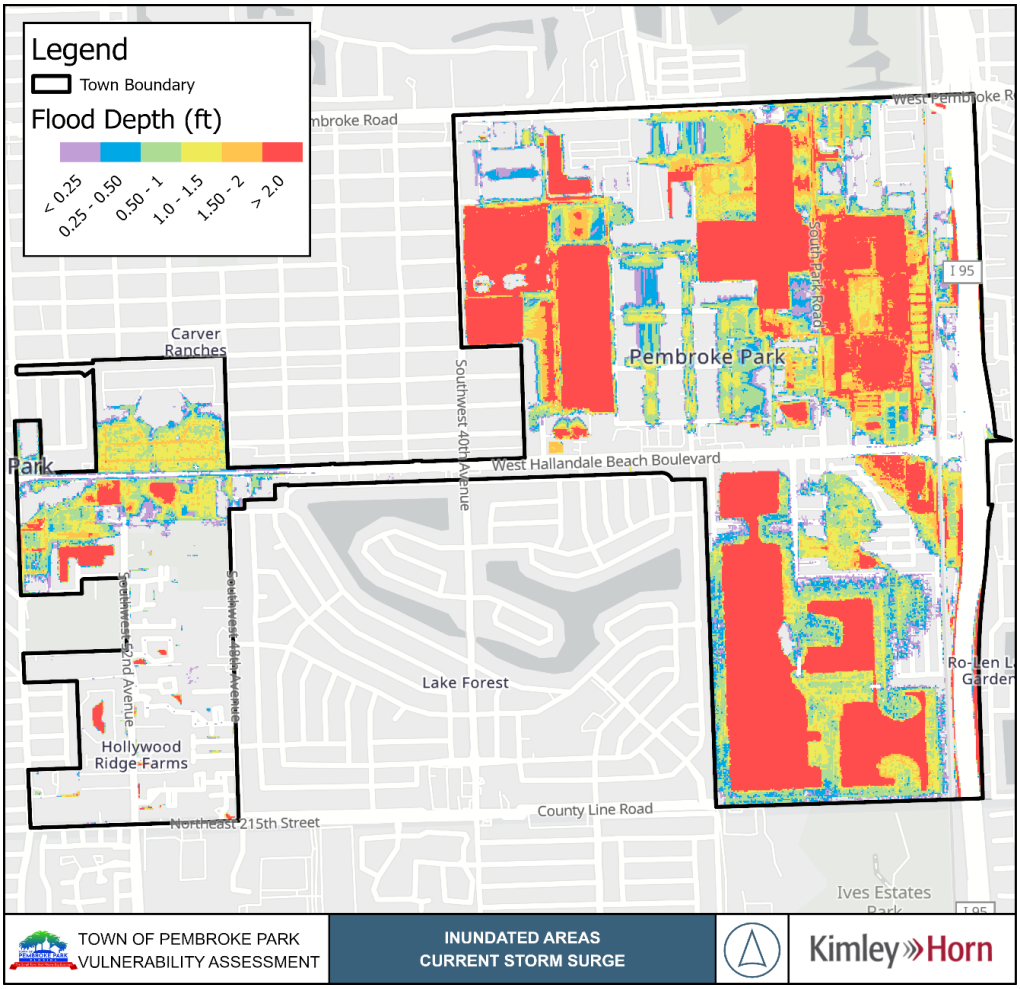

FIGURE 9: FLOODING IN THE CURRENT STORM SURGE SCENARIO

In the current storm surge scenario, a medium percentage of critical infrastructure and critical community and emergency facilities are impacted. Additionally, a high percentage of transportation assets and evacuation routes and natural assets are impacted in flooding resulted from current storm surge conditions. Refer to **Table 10-Table 13 and APPENDIX D** for the results of the exposure analysis as it relates to critical assets.

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Future Storm Surge Flooding

Results of future storm scenarios show increased flood extents and more severe flood depths within the Town. The surface water ponds and the areas surrounding them, experience the most flooding. In the IH 2070 scenario, almost all the Town is inundated with at least 0.3-feet of water.

Figure 10 shows the extents of future storm surge flooding in the Intermediate-High 2070 SLR scenario.

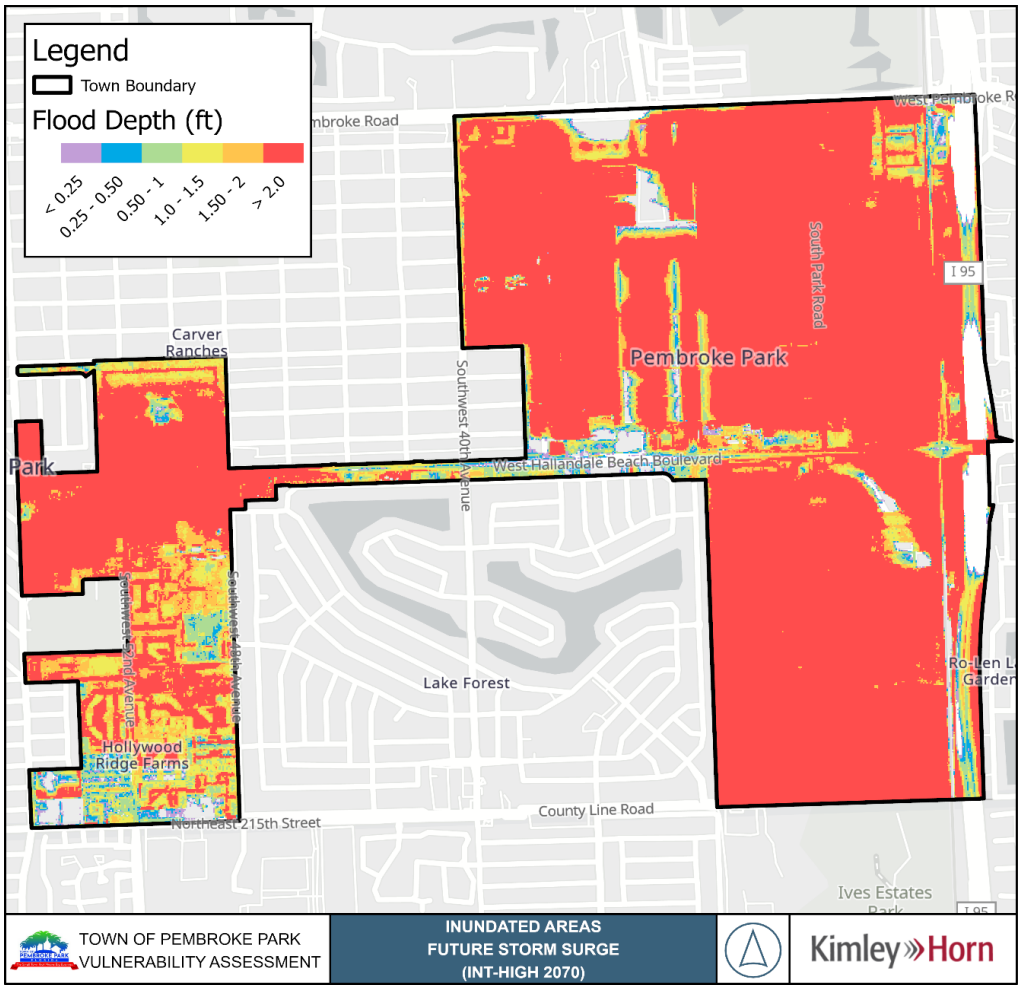

FIGURE 10: FLOODING IN THE FUTURE STORM SURGE INT-HIGH 2070 SCENARIO

In most of all projected storm surge scenarios, critical community and emergency facilities were found to be resilient and received no flood exposure, the exception is the Intermediate-High 2070 scenario where there were a medium percentage exposed. In the projected compound storm surge scenarios, a range of low to medium percentage of transportation assets and critical infrastructure were found to be exposed. Lastly, a high percentage of natural, cultural, and historical assets were exposed in all compound storm surge scenarios. For a detailed breakdown of exposure by asset type, refer to **Table 10-Table 13 and APPENDIX D**.

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Compound Flooding Scenarios

Compound flooding inundation extents were evaluated using data collected for the 100-year/24-hour Rainfall and King Tide scenarios in current conditions and projected conditions with SLR. Compound flooding extents were generated using bathtub modelling hybrid bathtub techniques. The assessment does not consider the potential for storm intensification due to climate change.

King Tides and 100-Year, 24-Hour Flooding

Results of the compound flooding indicate significant flooding within the municipal boundary throughout the whole town, with highest flooding being on the road centerlines and adjacent neighborhoods. The regions of Miami Lakes impacted by the compound rainfall and king scenarios are similar to the current rainfall scenarios with increased flood depths. The areas impacted by both rainfall and SLR, include almost the entire area of the Town's area. Flooding may not occur in these areas if appropriate stormwater infrastructure exists to properly route the water away from these areas.

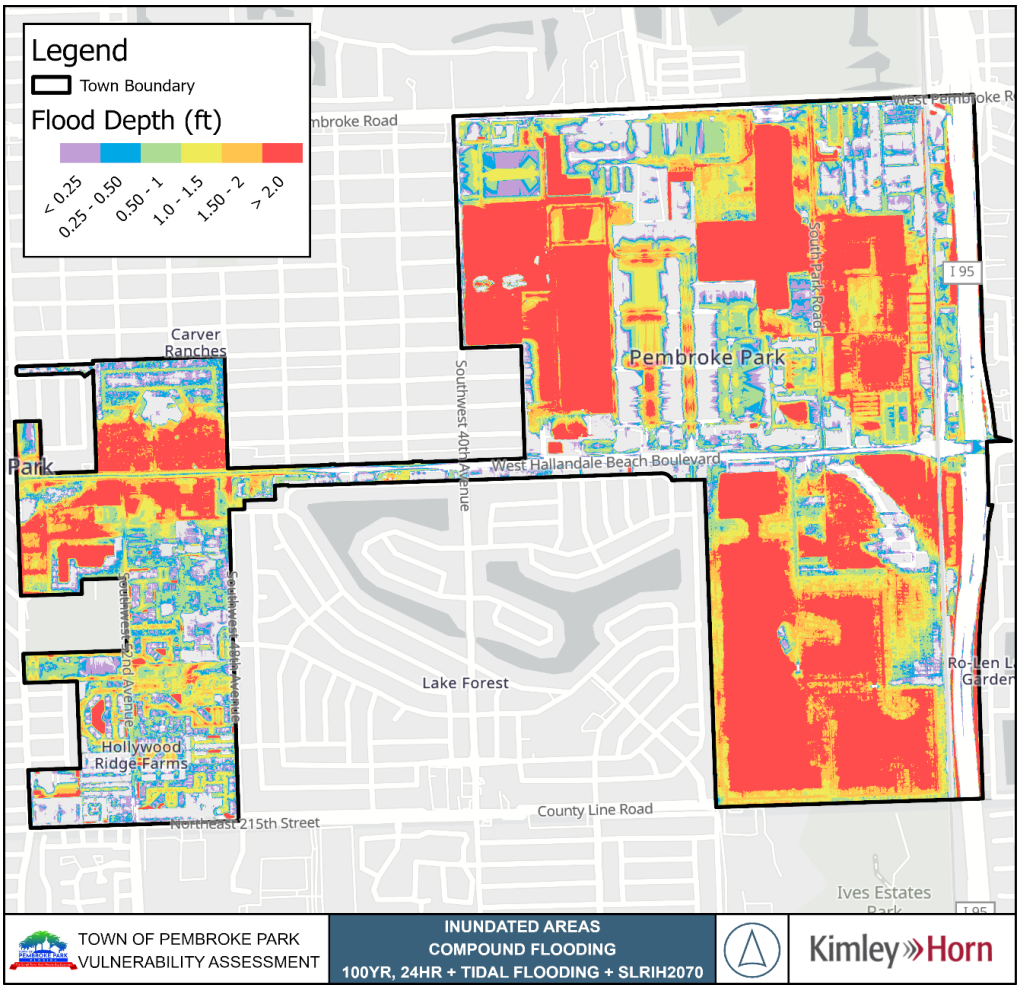

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FIGURE 11: FLOODING IN THE COMPOUND SCENARIO OF 100-YEAR, 24-HOUR STORM WITH FUTURE KING-TIDE CONDITIONS - INT-HIGH 2070 SCENARIO

SUMMARY TABLES

To assess the extent of flooding by asset type in each scenario, the following criteria was used:

TABLE 9. EXPOSURE ANALYSIS LEGEND

Flood Exposure	Criteria
No Risk	No critical assets impacted
Low	25% or less of critical assets impacted
Medium	Between 25% and 75% of critical assets impacted
High	More than 75% of critical assets impacted

The results of the exposure analysis have been summarized by the percentage each storm impacts each asset class in **Table 10-13.**

TABLE 10: TRANSPORTATION ASSETS AND EVACUATION ROUTES IMPACTED BY SCENARIOS

Asset Class	Asset Owner (s)	Scenario	Percent of Total Assets Impacted
Transportation Assets and Evacuation Routes	Town of Pembroke Park and FDOT	100YR,24HR	93.3%
		Projected Rainfall – 100YR, 24HR + SLRIL2040	93.3%
		Projected Rainfall – 100YR, 24HR + SLRIH2040	93.3%
		Projected Rainfall – 100YR, 24HR + SLRIL2070	93.3%
		Projected Rainfall – 100YR, 24HR + SLRIH2070	93.3%
		500YR,24HR	93.3%
		Projected Rainfall – 500YR, 24HR + SLRIL2040	93.3%
		Projected Rainfall – 500YR, 24HR + SLRIH2040	93.3%
		Projected Rainfall – 500YR, 24HR + SLRIL2070	93.3%
		Projected Rainfall – 500YR, 24HR + SLRIH2070	93.3%
		Current King Tide Conditions	0.0%
		Future King Tidal (IL2040)	0.0%
		Future King Tidal (IH2040)	6.7%
		Future King Tidal (IL2070)	33.3%
		Future King Tidal (IH2070)	86.7%
		Current Storm Surge	93.3%
		Storm Surge with SLRIL2040	93.3%
		Storm Surge with SLRIH2040	93.3%
		Storm Surge with SLRIL2070	93.3%
		Storm Surge with SLRIH2070	93.3%
		Compound Flooding – 100YR, 24HR + Current King Tide	93.3%
		Compound Flooding – 100YR, 24HR + King Tide IL2040	93.3%
		Compound Flooding – 100YR, 24HR + King Tide IH2040	93.3%
		Compound Flooding – 100YR, 24HR + King Tide IL2070	93.3%
		Compound Flooding – 100YR, 24HR + King Tide IH2070	93.3%

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TABLE 11: CRITICAL INFRASTRUCTURE ASSETS IMPACTED BY SCENARIOS

Asset Class	Asset Owner (s)	Scenario	Percent of Total Assets Impacted
Critical Infrastructure	Town of Pembroke Park	100YR,24HR	90.9%
		Projected Rainfall – 100YR, 24HR + SLRIL2040	90.9%
		Projected Rainfall – 100YR, 24HR + SLRIH2040	90.9%
		Projected Rainfall – 100YR, 24HR + SLRIL2070	90.9%
		Projected Rainfall – 100YR, 24HR + SLRIH2070	90.9%
		500YR,24HR	90.9%
		Projected Rainfall – 500YR, 24HR + SLRIL2040	90.9%
		Projected Rainfall – 500YR, 24HR + SLRIH2040	90.9%
		Projected Rainfall – 500YR, 24HR + SLRIL2070	90.9%
		Projected Rainfall – 500YR, 24HR + SLRIH2070	90.9%
		Current King Tide Conditions	0.0%
		Future King Tidal (IL2040)	0.0%
		Future King Tidal (IH2040)	0.0%
		Future King Tidal (IL2070)	0.0%
		Future King Tidal (IH2070)	3.1%
		Current Storm Surge	4.7%
		Storm Surge with SLRIL2040	14.1%
		Storm Surge with SLRIH2040	50.0%
		Storm Surge with SLRIL2070	40.6%
		Storm Surge with SLRIH2070	100.0%
		Compound Flooding – 100YR, 24HR + Current King Tide	90.9%
		Compound Flooding – 100YR, 24HR + King Tide IL2040	90.9%
		Compound Flooding – 100YR, 24HR + King Tide IH2040	90.9%
		Compound Flooding – 100YR, 24HR + King Tide IL2070	90.9%
		Compound Flooding – 100YR, 24HR + King Tide IH2070	90.9%

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TABLE 12: CRITICAL COMMUNITY AND EMERGENCY FACILITIES ASSETS IMPACTED BY SCENARIOS

Asset Class	Asset Owner (s)	Scenario	Percent of Total Assets Impacted
Critical Community and Emergency Facilities	Town of Pembroke Park	100YR,24HR	96.9%
		Projected Rainfall – 100YR, 24HR + SLRIL2040	96.9%
		Projected Rainfall – 100YR, 24HR + SLRIH2040	96.9%
		Projected Rainfall – 100YR, 24HR + SLRIL2070	96.9%
		Projected Rainfall – 100YR, 24HR + SLRIH2070	96.9%
		500YR,24HR	96.9%
		Projected Rainfall – 500YR, 24HR + SLRIL2040	96.9%
		Projected Rainfall – 500YR, 24HR + SLRIH2040	96.9%
		Projected Rainfall – 500YR, 24HR + SLRIL2070	96.9%
		Projected Rainfall – 500YR, 24HR + SLRIH2070	96.9%
		Current King Tide Conditions	0.0%
		Future King Tidal (IL2040)	0.0%
		Future King Tidal (IH2040)	0.0%
		Future King Tidal (IL2070)	0.0%
		Future King Tidal (IH2070)	3.1%
		Current Storm Surge	4.7%
		Storm Surge with SLRIL2040	14.1%
		Storm Surge with SLRIH2040	50.0%
		Storm Surge with SLRIL2070	40.6%
		Storm Surge with SLRIH2070	100.0%
		Compound Flooding – 100YR, 24HR + Current King Tide	96.9%
		Compound Flooding – 100YR, 24HR + King Tide IL2040	96.9%
		Compound Flooding – 100YR, 24HR + King Tide IH2040	96.9%
		Compound Flooding – 100YR, 24HR + King Tide IL2070	96.9%
		Compound Flooding – 100YR, 24HR + King Tide IH2070	96.9%

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TABLE 13: NATURAL, CULTURAL, AND HISTORICAL ASSETS IMPACTED BY SCENARIOS

Asset Class	Asset Owner (s)	Scenario	Percent of Total Assets Impacted by Type
Natural, Cultural, and Historical Assets	Town of Pembroke Park	100YR,24HR	100%
		Projected Rainfall – 100YR, 24HR + SLRIL2040	100%
		Projected Rainfall – 100YR, 24HR + SLRIH2040	100%
		Projected Rainfall – 100YR, 24HR + SLRIL2070	100%
		Projected Rainfall – 100YR, 24HR + SLRIH2070	100%
		500YR,24HR	100%
		Projected Rainfall – 500YR, 24HR + SLRIL2040	100%
		Projected Rainfall – 500YR, 24HR + SLRIH2040	100%
		Projected Rainfall – 500YR, 24HR + SLRIL2070	100%
		Projected Rainfall – 500YR, 24HR + SLRIH2070	100%
		Current King Tide Conditions	78.9%
		Future King Tidal (IL2040)	84.2%
		Future King Tidal (IH2040)	89.5%
		Future King Tidal (IL2070)	89.5%
		Future King Tidal (IH2070)	89.5%
		Current Storm Surge	94.7%
		Storm Surge with SLRIL2040	100%
		Storm Surge with SLRIH2040	100%
		Storm Surge with SLRIL2070	100%
		Storm Surge with SLRIH2070	100%
		Compound Flooding – 100YR, 24HR + Current King Tide	100%
		Compound Flooding – 100YR, 24HR + King Tide IL2040	100%
		Compound Flooding – 100YR, 24HR + King Tide IH2040	100%
		Compound Flooding – 100YR, 24HR + King Tide IL2070	100%
		Compound Flooding – 100YR, 24HR + King Tide IH2070	100%

The spatial extent of all flooding scenarios analyzed are in **APPENDIX D.**

TASK 5 – SENSITIVITY ANALYSIS

A sensitivity analysis was performed to assess the risk posed to each critical asset and rank their vulnerability due to flooding from each of the various storm scenarios that were modelled in the exposure analysis. This section of the vulnerability assessment builds on the previously completed exposure analysis in which flood extents for each scenario were generated for the Town. The following sections outline the methodology used to perform the sensitivity analysis for the Town of Pembroke Park.

METHODOLOGY

Defining Critical Elevation

Critical assets evaluated in vulnerability assessments funded by the Resilient Coastlines Grant Program are prescribed within s. 380.093, F.S. and are subdivided into four (4) categories including:

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- Transportation Assets and Evacuation Routes
- Critical Infrastructure
- Critical Community and Emergency Facilities
- Natural, Cultural, and Historical Resources

The following sections further define asset types within these categories, outline the assets found within the Town, and indicate the data source used to identify location and critical elevation of each asset in this vulnerability assessment.

The critical elevation of an asset is this study was defined as the elevation at which floodwater would disrupt service of the structure. The structures analyzed in this project are unique with regard to level of service; this resulted in varied definitions of critical elevation for each asset class.

Three different methods were used to define critical elevation in this study including:

1. Finished Floor Elevation (FFE) – Data was pulled directly from the as-builts or other survey documentation, such as GIS attribute tables provided by the Town. This method was preferred, when available. Any additional assumptions made using the FFE method are defined when used in the following sections of this report.
2. Cut Profile – Method in which a line feature was used to cut a profile from the DEM and determine lowest elevation along the feature. This method was used for major roadways and rail tracks.
3. Zonal Statistics – Method in which the footprint of an asset was defined and the minimum elevation from the DEM within the footprint was extracted. For any finished structure, the slab-on-grade elevation was assumed to be minimum DEM elevation plus 1-foot.
4. Percent Inundation by Area – Method in which the total area and the total flooded area of an asset are compared to determine the amount of flooding impacting the asset. Results are reported as a percent area.

Assigning Risk Sensitivity

Critical elevations for each asset were evaluated against flood depths to identify asset vulnerability in each storm event. The degree of flooding was defined by the inundation depth relative to the critical elevation of storm event. The degree of flooding was defined by the inundation depth relative to the critical elevation of the structure. For structures with less concretely defined critical elevation (parks, roads, etc.), flood impacts were evaluated using unique methodology described on a case-by-case basis in the following sections.

The final phase of the analysis was to assign a risk level, or criticality, to each asset in the paired asset-threat matrices. Critical assets were grouped into paired asset-threat matrices for each scenario and a degree of criticality was assigned. Within this analysis, risk considerations were made for the direct impacts of flooding to the asset and the more general operational impacts on the community. For the purposes of this vulnerability assessment, criticality was defined as follows:

- **Low -** flooding occurs but would cause minimum impact; asset is able to function during or after the event.
- **Medium -** flooding would cause moderate impact; asset may have limited or impaired function during or after flooding event; repairs may be needed.
- **High -** flooding would cause complete asset loss; complete shutdown of operation is likely to occur with high cost associated with repair or replacement; potential impact to health and safety.

Paired asset-threat matrices for all critical assets reviewed in the sensitivity analysis can be found in **APPENDIX E and APPENDIX F**.

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The following sections outline the methodology and results of this analysis, broken down by asset group.

TRANSPORTATION AND EVACUATION ROUTES

Per s. 380.093, F.S. (2)(a) 1., Transportation and Evacuation Routes shall include airports, bridges, bus terminals, ports, major roadways, marinas, rail facilities, and railroad bridges owned and/or maintained emergency response.

All major roads and bridges in the project area were evaluated using data from the Broward County and Pembroke Park GIS Data Hub. Additional information from the same source was used to identify primary evacuation routes to refine major roads for analysis and define road and bridge centerlines.

The data collected for critical assets defined as "Transportation Assets and Evacuation Routes" per s. 380.093(2)(a), F.S. are outlined in **Table 14.**

TABLE 14: TRANSPORTATION ASSETS AND EVACUATION ROUTES

Asset Type	Source	Critical Elevation Method
Airports	N/A	N/A
Bridges	N/A	N/A
Bus Terminals	N/A	N/A
Ports	N/A	N/A
Major Roadways	Town of Pembroke Park	Cut Profile
Marinas	N/A	N/A
Rail Facilities	ArcGIS Enterprise	Cut Profile
Railroad Bridges	N/A	N/A

Major Roads

Major roads were evaluated using a cut profile method in which road centerlines were used to identify the elevation at stations along the route as it passes through the Town. A uniform cross-section across the road centerline was assumed. It should be noted that all overpass elevations were previously processed out of the DEM, creating voids in the road elevation data. Unless otherwise noted, it is assumed flooding of these roads does not occur at the locations. Critical elevations for all critical infrastructure in Pembroke Park are reported in **Table 15.**

TABLE 15: CRITICAL ELEVATIONS FOR MAJOR ROADS

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
I-95 Ramp	Major Road	5.5
S Park Road	Major Road	4.2
I-95	Major Road	9.0
SW 20th Street	Major Road	5.0
W Lake Drive	Major Road	5.2
Lake Shore Drive	Major Road	5.0
SW 30th Avenue	Major Road	3.9
John P Lyons Lane	Major Road	3.5
SW 32nd Avenue	Major Road	5.3
SW 34th Avenue	Major Road	4.9
SW 32nd Terrace	Major Road	5.1
SW 22nd Street	Major Road	5.4
SW 52nd Avenue	Major Road	5.5
Hallandale Beach Boulevard	Major Road	6.7

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Criticality for major roads considered the following factors in assigning risk:

- Rainfall flooding is temporary – likelihood of complete asset loss is unlikely.
- Any flood depths greater than 0.5-feet would incur limited function of the road during and after the event.
- SLR flooding would cause permanent inundation and would therefore render the road asset a complete loss.
- Saltwater corrosion and significant wave action caused by storm surge may require evaluation following a storm event.

Rail Facilities

Rail facilities were evaluated using the cut-profile method using the rail track centerlines to identify the elevation at stations along the track as it bisects the Town on the east. A uniform cross-section across the track centerline was assumed.

TABLE 16: CRITICAL ELEVATIONS FOR RAIL FACILITIES

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
Amtrak & Commuter Track	Rail Facility	7.1

Criticality for rail tracks considered the following factors in assigning risk:

- Rainfall flooding is temporary – likelihood of complete asset loss is unlikely.
- Any flood depths greater than 0.5-feet would incur limited function of the rail track during and after the event.
- SLR flooding would cause permanent inundation and would therefore render the rail track asset a complete loss.
- Saltwater corrosion and significant wave action caused by storm surge may require evaluation following a storm event.

CRITICAL INFRASTRUCTURE

Per s. 380.093, F.S. (2)(a) 2., Critical Infrastructure shall include wastewater treatment facilities and lift stations, stormwater treatment facilities and pump stations, drinking water facilities, water utility conveyance systems, electric production and supply facilities, solid and hazardous waste facilities, military installations, communications facilities, and disaster debris management sites owned and/or maintained by the Town.

There were no wastewater treatment facilities, stormwater treatment facilities, drinking water facilities, water utility conveyance systems, electric production and supply facilities, or military installations located within the Town of Pembroke Park jurisdiction.

Stormwater Pump Stations, Communications Facilities, and Disaster Debris Management Sites were identified as Critical Infrastructure assets within the Town of Pembroke Park.

The data collected on critical assets defined as “Critical Infrastructure” per s. 380.093(2)(a), F.S. are outlined in **Table 17.**

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TABLE 17: CRITICAL INFRASTRUCTURE

Asset Type	Source	Critical Elevation Method
Wastewater Treatment Facilities	N/A	N/A
Wastewater Lift Stations	N/A	N/A
Stormwater Treatment Facilities (Stormwater Pump Stations)	Town of Pembroke Park	Zonal Statistics
Stormwater Treatment Facilities (Injection Wells)	N/A	N/A
Stormwater Treatment Facilities (Pollution Control Boxes)	N/A	N/A
Drinking Water Facilities	N/A	N/A
Drinking Water Pump Stations	N/A	N/A
Water Utility Conveyance Systems (Water Mains)	N/A	N/A
Electric Productions and Supply Facilities	N/A	N/A
Military Installations	N/A	N/A
Communications Facilities	Town of Pembroke Park	Zonal Statistics
Disaster Debris Management Sites	Broward County	Zonal Statistics

Stormwater Pump Stations

Critical elevations for stormwater pump stations were determined using the Zonal Statistics tool to extract the lowest elevation around the structure from the DEM and adding 1-foot. The reported value was assumed to be in the critical elevation for these structures and the assumed elevation at which flooding of the system and loss of functionality occurs.

Critical elevations for all critical infrastructure in Pembroke Park are reported in **Table 18**.

TABLE 18: CRITICAL ELEVATIONS OF STORMWATER PUMP STATIONS

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
Pump 1	Pump Station	5.3
Pump 2	Pump Station	4.1
Pump 3	Pump Station	2.5
Pump 4	Pump Station	5.1
Pump 5	Pump Station	4.2

Criticality for stormwater pump stations considered the following factors in assigning risk:

- Rainfall flooding is temporary – likelihood of complete asset loss is unlikely but may affect the functionality of the structures during and following the event.
- Structure flooding is estimated when flood waters are at rim elevation.
- SLR flooding would cause permanent inundation and would therefore render the asset a complete loss.
- Saltwater infiltration and significant wave action caused by storm surge will require evaluation following a storm event.

Communication Facilities

Critical elevations for communication facilities were determined using the Zonal Statistics tool to extract the lowest elevation around the facility from the DEM and adding 1-foot. The reported value was

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assumed to be in the critical elevation for these structures and the assumed elevation at which flooding of the system and loss of functionality occurs.

Critical elevations for all communication facilities within the Town are reported in **Table 19.**

TABLE 19: CRITICAL ELEVATIONS OF COMMUNICATION FACILITIES

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
Trinity Broadcasting- Miami	Communication Facilities	4.8
WHFT TV Transmitter Tower	Communication Facilities	6.0
Local 10	Communication Facilities	10.5
Wimp TV UHF Channel 25	Communication Facilities	10.4
Dale Village	Communication Facilities	8.4

Criticality for communication facilities considered the following factors in assigning risk:

- Any flooding greater than 0.5-feet would likely incur damage, accessibility concerns, and limited function of the facility during and after the event.
- SLR flooding would cause permanent inundation and would therefore render the asset a complete loss.
- Saltwater corrosion and significant wave action caused by storm surge will require evaluation following a storm event.

Disaster Debris Management Site

Critical elevations for the disaster debris management site within the Town was determined using the Zonal Statistics tool to extract the lowest elevation around the facility from the DEM and adding 1-foot. The reported value was assumed to be in the critical elevation for the structure and the assumed elevation at which flooding of the system and loss of functionality occurs.

The critical elevation of the disaster debris management site within the Town is reported in **Table 20***TABLE 19***.**

TABLE 20: CRITICAL ELEVATIONS OF DISASTER DEBRIS MANAGEMENT SITE

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
Utility – Solid Waste Transfer Station, Pembroke Park Recycling Center	Disaster Debris Management Site	8.4

Criticality for the disaster debris management site considered the following factors in assigning risk:

- Any flooding greater than 0.5-feet would likely incur damage, accessibility concerns, and limited function of the facility during and after the event.
- SLR flooding would cause permanent inundation and would therefore render the asset a complete loss.
- Saltwater corrosion and significant wave action caused by storm surge will require evaluation following a storm event.

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CRITICAL COMMUNITY AND EMERGENCY FACILITIES

Per s. 380.093, F.S. (2)(a) 3., Critical Community and Emergency Facilities shall include schools, colleges, universities, community centers, correctional facilities, disaster recovery centers, emergency medical service facilities, emergency operation centers, fire stations, health care facilities, hospitals, law enforcement facilities, local government facilities, logical staging areas, affordable public housing, risk shelter inventory, and state government facilities owned and/or maintained by the Town.

There were no colleges, universities, correctional facilities, logistical staging areas, fire stations, hospitals, risk shelter inventory, and state government facilities located within the Town of Pembroke Park.

The data collected on critical assets defined as “Critical Community and Emergency Facilities” per s. 380.093(2)(a), F.S. are outlined in **Table 21.**

TABLE 21: CRITICAL COMMUNITY AND EMERGENCY FACILITIES

Asset Type	Source	Critical Elevation Method
Schools	Town of Pembroke Park	Zonal Statistics
Colleges	N/A	N/A
Universities	N/A	N/A
Community Centers	N/A	N/A
Correctional Facilities	N/A	N/A
Disaster Recovery Centers	Broward County	Zonal Statistics
Emergency Medical Service Facilities	N/A	N/A
Emergency Operation Centers	N/A	N/A
Fire Stations	N/A	N/A
Health Care Facilities	Town of Pembroke Park	Zonal Statistics
Hospitals	N/A	N/A
Law Enforcement Facilities	Town of Pembroke Park	Zonal Statistics
Local Government Facilities	Town of Pembroke Park	Zonal Statistics
Logistical Staging Areas	N/A	N/A
Affordable Public Housing	Broward County	As-Builts & Zonal Statistics
Risk Shelter Inventory	N/A	N/A
State Government Facilities	N/A	N/A

The FFE was identified as the critical elevation at which buildings would be considered vulnerable to flooding. Critical elevation for all Town facilities with unreported FFEs were determined using the Zonal Statistics tool to extract the lowest elevation within the building footprint. This value was assumed to be at grade and 1-foot was added to define the slab-on-grade elevation used to determine asset risk.

Critical elevations for all critical community and emergency facilities in Pembroke Park are reported in **Table 22.** Values marked with an (*) indicated elevations were pulled from existing survey or as-built data.

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TABLE 22: CRITICAL ELEVATIONS OF COMMUNITY AND EMERGENCY FACILITIES

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)	Source
Pembroke Gardens Apartments (includes 10 facilities)	Affordable Public Housing	9.2*	As-Built Survey (1998)
Pembroke Park Apartments (includes 12 facilities)	Affordable Public Housing	8.9 – 9.9*	As-Built Survey (1998)
Pembroke Villas (includes 13 facilities)	Affordable Public Housing	9.4*	As-Built Survey (2001)
The Peninsula Assisted Living & Memory Care	Health Care Facility	5.4	Zonal Statistics
Plaza of Hallandale Beach Assisted Living	Health Care Facility	8.0	
Watkins Elementary	School	9.0*	As-Built Survey (1996)
Lake Forest Elementary School	School	8.0*	As-Built Survey (2002)
Mimi's Learning Center	School	6.1	Zonal Statistics
Pembroke Park Montessori School	School	8.5	
ST2589	Law Enforcement Facility	9.4	
Government - Town Hall	Local Government Facility	8.2	

Criticality for Town buildings and facilities considered the following factors in assigning low, medium, or high risk:

- Any flooding greater than 0.5-feet would likely incur damage, accessibility concerns, and limited function of the facility during and after the event.
- SLR flooding would cause permanent inundation and would therefore render the asset a complete loss.
- Saltwater corrosion and significant wave action caused by storm surge will require evaluation following a storm event.

NATURAL, CULTURAL, AND RESOURCES

Per s. 380.093, F.S. (2)(a) 4., Natural, Cultural, and Historical Resources shall include conservation lands, parks, shorelines, surface waters, wetlands, and historical and cultural assets owned and/or maintained by the Town.

The data collected on critical assets defined as "Natural, Cultural, and Historical Resources" per s. 380.093(2)(a), F.S. are outlined in **Table 23.**

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TABLE 23: NATURAL, CULTURAL, AND HISTORICAL RESOURCES

Asset Type	Source	Critical Elevation Method
Conservation Lands	N/A	N/A
Parks	Broward County	Zonal Statistics
Shorelines	N/A	N/A
Surface Waters	Broward County	Zonal Statistics
Wetlands	N/A	N/A
Historical and Cultural Assets	N/A	N/A

Parks

In lieu of the critical elevation method, an assessment of percent flooding area was made for parks to evaluate criticality. This assessment utilized the Zonal Statistics method to identify total park area. Total acreage for all parks evaluated can be found in **Table 24.**

TABLE 24: PARKS, TOTAL AREA

Asset Name	Asset Class	Total Area (Acres)
Patrick Behan Park	Park	1.7
Lake Forest Park	Park	5.4
Pembroke Park Preserve	Park	14.3
AJ Ryan Park	Park	5.7
Howard Clark Sr Linear Walkway	Park	0.5

Criticality for parks considered the following factors in assigning low, medium, or high risk:

- Rainfall flooding is temporary – likelihood of complete asset loss is unlikely.
- Any flooding greater than 75% by area would likely to incur significantly limited function of the area during and after the event.
- Significant SLR flooding would cause permanent inundation and would therefore render the park asset a complete loss.

Surface Waters

Critical elevations for surface waters in Pembroke Park were identified using the maximum elevation pulled from the Zonal Statistics tool as the top of bank and, therefore, the critical elevation for surface waters. **Table 25** shows the critical elevation of surface waters in Pembroke Park.

TABLE 25: SURFACE WATER CRITICAL ELEVATIONS

Asset Name	Asset Class	Critical Elevation (NAVD88, ft)
840436	Surface Water	1.5
700013	Surface Water	1.5
699824	Surface Water	1.5
840440	Surface Water	1.5
840441	Surface Water	1.5
697749	Surface Water	1.5
840434	Surface Water	1.5
700506	Surface Water	1.5
700039	Surface Water	1.5
840438	Surface Water	1.5
700787	Surface Water	1.5
698034	Surface Water	1.5
Desoto Lakes	Surface Water	1.5
698255	Surface Water	1.5

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Criticality for surface waters considered the following factors in assigning low, medium, or high risk:

- Many of these waters are designed to provide storage for rainfall – an increase in flood elevation overtopping the top of bank of the structure is where flooding affects the surrounding area.
- SLR flooding would cause permanent inundation and would therefore permanently change the storage volume of the pond.
- Saltwater infiltration is a designated high-risk event for all systems.
- Location of surface waters relative to the built environment was considered in assigning criticality.

RESULTS AND DISCUSSION

The sensitivity analysis conducted for the Town of Pembroke Park reveals significant vulnerabilities among various assets to flooding, particularly in scenarios involving storm surges and compound flooding. This discussion provides a general overview of the findings, highlighting the most affected areas and suggesting potential improvements to enhance the Town's resiliency. Refer to **APPENDIX E** and **APPENDIX F** for a summary of results of the sensitivity analysis per Critical Asset Class.

The sensitivity analysis indicates that the majority of assets in Pembroke Park are highly susceptible to flooding during storm surge and compound flooding scenarios. These scenarios demonstrated the most widespread impact, with the notable exception of several major roads, railroads, and communication facilities.

The analysis performed on Transportation Assets and Evacuation Route assets (major roads) identified targeted locations at which road improvements may be focused to improve the Town's resiliency. More specifically, John P. Lyons Lane, Lake Shore Drive, and SW 30th Avenue are all susceptible to flooding in all compound scenarios in current and projected events and storm surge scenarios. Most major roads and evacuation routes, including Hallandale Beach Boulevard, were found to be resilient across all evaluated scenarios. The accuracy of these results could be further improved by obtaining actual lane cross-slopes.

Critical infrastructure within the Town generally demonstrated higher resilience compared to other asset classes analyzed, including communication facilities. However, Pumps 1 – 5 were found to vary in criticality in each evaluated scenario. More specifically, Pump 3 was identified as vulnerable in the 100-year, 24-hour, 500-year, 24-hour, compound flooding scenarios, future tidal-intermediate high 2070, and all current and projected storm scenarios.

All critical community and emergency facilities, except for Pembroke Park Montessori School, were found to be vulnerable in scenarios involving rainfall-induced flooding, compound flooding, and storm surges. Pembroke Park Montessori School's vulnerability was limited to the storm surge intermediate scenario for 2070. Additional hydraulic routing is recommended to provide additional protection at all schools and health care facilities. Lake Forest Elementary School and Watkins Elementary Schools are not recommended to be used as emergency staging locations, as they are at risk of flooding and accessibility concerns during and following storm events. All affordable public housing varied in criticality in all evaluated scenarios, with the exception of tidal flooding in current and projected conditions.

All Natural, Cultural, and Historical assets were found to be at risk in all analyzed scenarios due to low elevations and proximity to the groundwater table. Overall, the result of this analysis is limited by the estimations made in defining critical elevation for various assets.

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IDENTIFY FOCUS AREAS

Focus areas for the Town of Pembroke Park were identified to highlight particularly vulnerable areas within the Town. Focus areas were identified based on the results of the Exposure and Sensitivity Analyses and results of the updated Stormwater Master Plan developed by Kimley-Horn (2024). Three focus areas were identified based on the above. The following sections detail the justification behind the selection of the focus areas as well as the assets contained within each area.

Refer to **Figure 12** for a map of the focus areas.

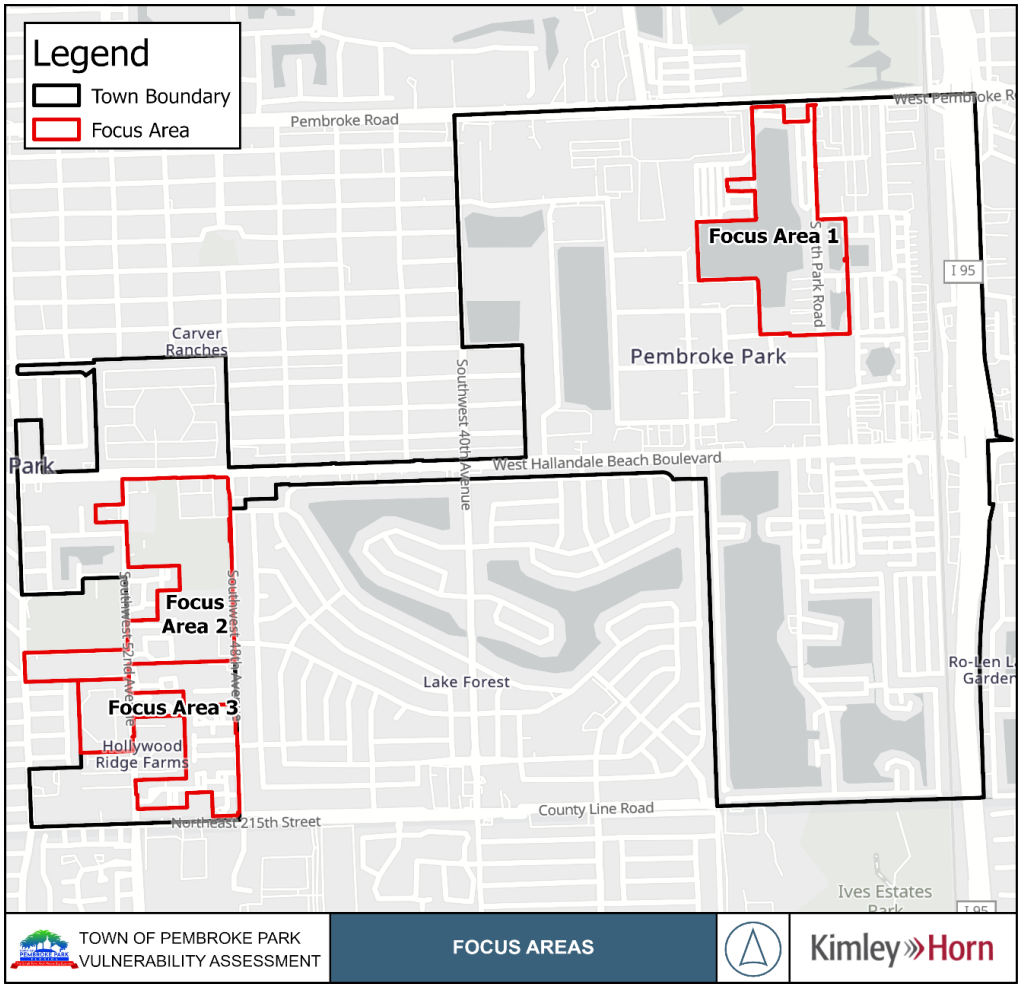

FIGURE 12. FOCUS AREAS IDENTIFIED WITHIN THE TOWN

FOCUS AREA 1 – NORTHEAST REGION OF TOWN BETWEEN SOUTH PARK ROAD AND SW 32ND AVENUE

The northeastern section of the Town was selected as a focus area because it was shown to flood during all reviewed scenarios. The area contains fourteen critical assets defined as a result of the

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exposure and sensitivity analyses. **Table 26.** Focus Area 1 Critical Assets lists all of the critical assets within Focus Area 1.

TABLE 26. FOCUS AREA 1 CRITICAL ASSETS

Asset Name	Asset Type	Asset Class
South Park Road	Major Roadway	Transportation Assets and Evacuation Routes
Pump 1	Stormwater Pump Station	Critical Infrastructure
Pump 2	Stormwater Pump Station	Critical Infrastructure
Pump 3	Stormwater Pump Station	Critical Infrastructure
Pump 4	Stormwater Pump Station	Critical Infrastructure
Pump 5	Stormwater Pump Station	Critical Infrastructure
Trinity Broadcasting – Miami	Communication Facility	Critical Infrastructure
Pembroke Park Recycling and Transfer Center	Disaster Debris Management Site	Critical Infrastructure
697749	Surface Water	Natural, Cultural, and Historical Assets
700039	Surface Water	Natural, Cultural, and Historical Assets
699824	Surface Water	Natural, Cultural, and Historical Assets
840436	Surface Water	Natural, Cultural, and Historical Assets
Howard Clark Sr Linear Walkway	Park	Natural, Cultural, and Historical Assets
Patrick Behan Park	Park	Natural, Cultural, and Historical Assets

FOCUS AREA 2 – BETWEEN HALLANDALE BEACH BOULEVARD AND SW 54TH AVENUE

The area between Hallandale Beach Boulevard and SW 54th Avenue was selected as a focus area as it is low-lying and is consistently flooding in all scenarios analyzed. The region contains an overall total of thirty critical assets defined as result of the exposure and sensitivity analyses. **Table 27** lists all of the critical assets within Focus Area 2.

TABLE 27. FOCUS AREA 2 CRITICAL ASSETS

Asset Name	Asset Type	Asset Class
SW 52nd Avenue	Major Roadway	Transportation Assets and Evacuation Routes
Government Town Hall	Local Government Facility	Community and Emergency Facilities
Lake Forest Elementary School (includes 18 facilities)	School	Community and Emergency Facilities
Watkins Elementary School (includes 2 facilities)	School	Community and Emergency Facilities
Mimi's Learning Center	School	Community and Emergency Facilities
The Peninsula Assisted Living & Memory Care	Assisted Living Facility	Community and Emergency Facilities
Pembroke Park Reserve	Park	Natural, Cultural, and Historical Assets

This report was funded, in part, through a grant agreement from the Florida Department of Environmental Protection, Florida Resilient Coastlines Program, by a grant provided by the Florida Coastal Office. The views, statements, findings, conclusions, and recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the State of Florida or any of its sub agencies.

Focus Area 3 – Hollywood Ridge Farms

The southwestern area of the Town was selected as a focus area as it is consistently flooding in all scenarios analyzed. The region contains an overall total of thirty-five critical assets defined as result of the exposure and sensitivity analyses. **Table 27** lists all of the critical assets within Focus Area 3.

TABLE 28. FOCUS AREA 3 CRITICAL ASSETS

Asset Name	Asset Type	Asset Class
Pembroke Gardens Apartments (includes 10 facilities)	Affordable Public Housing	Community and Emergency Facilities
Pembroke Park Apartments (includes 12 facilities)	Affordable Public Housing	Community and Emergency Facilities
Pembroke Villas (includes 13 facilities)	Affordable Public Housing	Community and Emergency Facilities

ADAPTATION STRATEGIES

Adaptation strategies may be defined as either as adaptive strategies, projects, plans, or policies that target current and future threats to critical infrastructure due to tidal or rainfall-induced flooding. Such adaptive measures may implement green and/or gray infrastructure to increase resiliency. Short-term and long-term adaptation strategies were defined to address the Town's current and future concerns and are summarized below.

Short Term Adaptation Strategies

Drainage Maintenance Program Update

Evaluate current drainage maintenance practices and adjust prioritization of the cleaning, inspection, and repair of piping and structures. Keeping the drainage system clear will alleviate operational issues during rainfall of tidal events by moving water more efficiently to stormwater outfalls.

Deployable Flood Barriers

Portable flood barriers to be utilized before major predicted events, in areas such as in front of critical buildings or electrical control rooms. They can come in the form of temporary walls, inflatable barriers, and modular systems. Beyond their effectiveness in preventing inundation, these barriers can be easy to store and deploy for critical assets located around project corridor improvements.

Dry Floodproofing

Dry floodproofing is aimed at protecting structures and assets from flood damage without preventing water from entering the building. Common techniques include installing flood-resistant doors and windows, applying waterproof coating, sealing every utility, temporary flood panels, and installing backflow preventors, check valves, and tide gates.

Long Term Adaptation Strategies

Raising Roadways

Increasing the elevation of roadways above the 100-year, 24-hour rainfall event or 2050 Intermediate SLR projection. Although this strategy is utilized to combat major rainfall events or future sea level rise, the Town would need to study drainage throughout the area to prevent additional flooding issues that new runoff could cause.

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FFE Ordinance

Town to increase the minimum FFE above the combined SLR scenarios so that any home, business or Town building after the policy is in place, for a certain amount of time, must be brought up to a minimum standard elevation.

Business Case Evaluation

An analysis performed to consider costs of an adaptation measure and other quantifiable information within the Town such as, insurance rates, economy, and property values, to support or oppose an investment decision to implement a specific adaptation measure.

Utilization of Gray and Green Stormwater Infrastructure

To manage both the current and projected flood depths, it is recommended that gray and green stormwater infrastructure implemented. Gray and green infrastructure can capture, store, and filter rainwater where it falls, helping to control excess water flow and improve water quality by removing pollutants. In addition to addressing flooding and runoff, urban aesthetics may be enhanced, local ecosystems will be supported, and public health may improve. Examples of such solutions include bioswales, rain gardens, and permeable pavement.

TASK 6 – FINAL VULNERABILITY ASSESSMENT REPORT, MAPS, AND TABLES

This report contains summaries of all tasks completed for this vulnerability assessment. Maps of all flooding scenarios can be found in **APPENDIX D.** Sensitivity analysis tables can be found in **APPENDIX F.**

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APPENDIX A

KICK-OFF MEETING MINUTES

Kimley»Horn

Town of Pembroke Park Vulnerability Assessment

KICK-OFF MEETING AGENDA

PROJECT: Vulnerability Assessment

DATE: January 11, 2024 TIME OF MEETING: 2:00 PM

PLACE OF MEETING: Virtual KH Proj No.: 143586004

A. Introduction

Attendees:

Town of Pembroke Park (Town): Aleem Ghany (Public Services Director), Tom Positano
CAS Governmental Services: Connie Vanassche (Vice President and Managing Member)
DC Strategies LLC: Desinda Wood-Carper (Municipal Administration/Grants Consultant)

Kimley-Horn (KH): Matt Brosman, Stefano Viola, Gisselle Gutierrez

B. Presentation

C. Questions/ Discussion

a. Historical/ Cultural Assets?
   i. The Town confirmed there are no historic sites.
   ii. Pembroke Park Reserve is a preserved park but still classifies as a critical asset.

b. Additional critical infrastructure assets?
   i. The Town noted of a Superfund site to consider as part of assessment.
   ii. The Town noted some lakes will be filled as development continues (Desoto and 20th St Lake).

c. Final Project Team?
   i. Team will consist of Connie, Aleem, Tom, and Desinda.

d. For what projects do you envision applying for Resilient Florida grants?
   i. In conjunction with the Stormwater Master Plan, the Assessment will be used to prioritize projects and will be submitted for grants.

e. Data gap review – our next meeting
   i. Next meeting will be scheduled to be after March 10th.

D. Action Items

a. KH will begin data acquisition of critical assets.
b. KH will send meeting minutes and copy of presentation.
c. Town staff to provide KH with 2023 CIP. *(Complete)*

APPENDIX B

DATA COLLECTION TECHNICAL MEMORANDUM

Revision Date: 04/2024

Task 2: Acquire Background Data

Prepared for:

Town of Pembroke Park
3150 SW 52nd Avenue
Pembroke Park, Florida 33023

Prepared by:

Kimley-Horn and Associates, Inc.
8201 Peters Road, Suite 2200
Plantation, FL 33324

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Registry No. 696
Plantation, Florida 145083000

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purposes and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley- Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley»Horn

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Kimley»Horn

1. INTRODUCTION

The Town of Pembroke Park (referred to as the "Town") received funding from the Florida Department of Environmental Protection through the Resilient Coastlines Program to conduct a Townwide Vulnerability Assessment. In support of this project, the Town contracted on November 17,2023, with Kimley-Horn and Associates Inc. (herein referred to as Kimley-Horn) to deliver the Vulnerability Assessment pursuant to Florida Statute 380.093. The first deliverable under this project is a Technical Memorandum for Task 2 - Acquire Background Data and is included herein.

This technical report provided by Kimley-Horn shall contain a review of the actions taken to collect data for this project as well as provide recommendations to address data gaps and actions taken to rectify them, where applicable. The collected data will provide Kimley-Horn with the information necessary to understand the area of interest and proceed with the assessment and analysis of exposure and sensitivity related to flooding extents and critical infrastructure within the Town.

2. OBJECTIVE

The objective of the Town of Pembroke Park Vulnerability Assessment Project is to identify and prioritize regionally significant areas at risk of flooding within the Town and specify the scenarios in which these areas are vulnerable.

3. BACKGROUND

The Town of Pembroke Park is an intercoastal municipality located in southeast Broward County, Florida, approximately 1.7 square miles in area. The Town is bounded by I-95 to the east, the Town of Ives Estates Park to the south, the City of Hollywood to the North, and the City of West Park to the west. Refer to ***Figure 1*** for a site map.

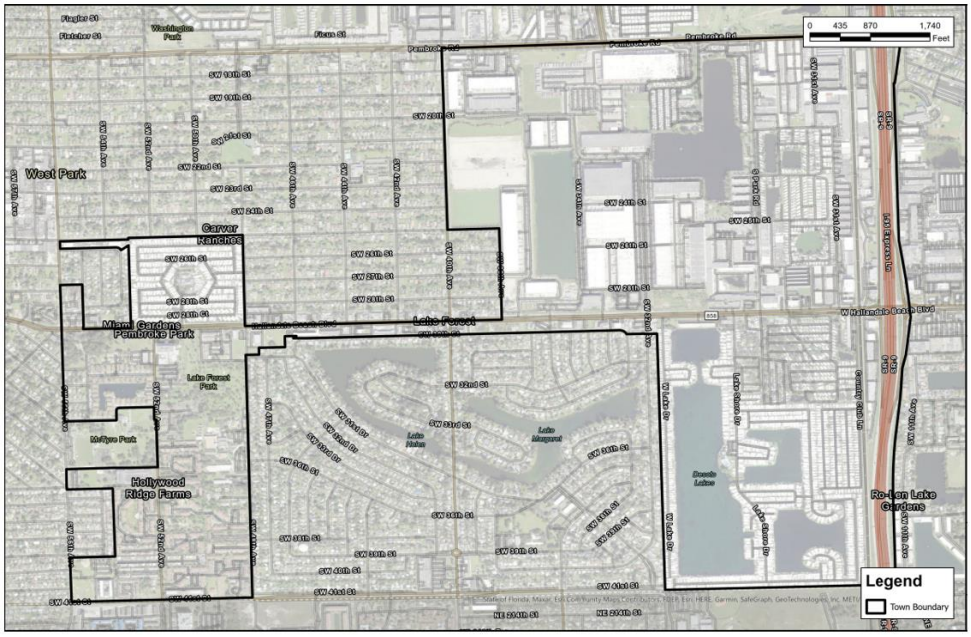


Figure 1. Pembroke Park Vulnerability Assessment Project Area

4. DATA COLLECTION

4.1. PROJECT KICKOFF

Kimley-Horn met virtually with employees of the Town of Pembroke Park to commence the project kick-off meeting on January 11, 2024. During this meeting, the project scope and schedule was reviewed. Kickoff meeting notes can be found in **Appendix A.**

4.2. ACQUIRE BACKGROUND DATA

Kimley-Horn, in coordination with the Town when applicable, researched and compiled the data needed to perform the vulnerability assessment based on the requirements defined in s. 380.093, F.S. The three main categories required to perform the assessment are as follows:

1. Critical/regionally significant assets
2. Topographic data
3. Flood scenario-related data

4.2.1 Critical/Regionally Significant Assets Inventory

Kimley-Horn requested and reviewed available information such as existing Town asset inventories, including:

- Municipal Boundary
- Town Stormwater Utility Inventory
- Town Water and Wastewater Utility Inventory
- Town Natural and Cultural Assets (Parks, Surface Water)
- Town Critical Infrastructure (Comm. Facilities, Lift Stations, Waste Facility, etc.)
- Transportation Assets (Roads, Rail, Bus Stops, Bridges)

Kimley-Horn developed a dataset register to summarize all data collected. The dataset register is included in **Appendix B.**

4.2.2 Topographic Data

Topographic data was sourced from the 2018 U.S. Department of Agriculture National Resource Conservation Service (USDA NRCS)/ U.S Geological Survey (USGS) Southeast Florida dataset with a one-meter cell size in NAVD88. ***Figure 2*** shows the elevation map for the Town.



Figure 2. Elevation in Town Boundary

4.2.3 Flood-Scenario Related Data

As applicable, the following flood-scenario related data was included.

Precipitation Data

Precipitation values from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 tool was collected to be used for the rainfall induced scenario. ***Table 1*** shows the rainfall-depths for the 100-year and 500-year, 24-hour events that will be evaluated in this analysis.

Table 1. NOAA Atlas 14 Rainfall-Depths

Rainfall Event	Depth (ft)
100-year, 24-hour	15.4
500-year, 24-hour	21.1

Groundwater Level Data

Groundwater flooding can be prevalent in low communities where sea-level rise has raised the groundwater level in the topmost aquifer. Groundwater levels determine an aquifer's storage capacity and can impact soil infiltration rates and should be studied where there are shallow water table conditions, as it is in the Town.

Groundwater level data was collected from the USGS National Water Information System (NWIS) which provides access to sites where current and historical groundwater data has been collected.

Sea Level Rise (SLR) Projections

The Southeast Florida Climate Compact (SEFLCC) publishes a Sea Level Rise Projection and Guidance Report every five years to ensure a regionally unified projection of sea level rise for adaptation planning. The latest version, published in 2019, abides NOAA's 2017 projection updates. The Unified Sea Level Rise Projection includes three curves for application: the NOAA High Curve, the NOAA Intermediate High Curve, and the curve corresponding to the median of

the intergovernmental panel on Climate Change (IPCC). For this assessment, the NOAA Intermediate High Curve was used for the planning year of 2040 and 2070.

Table 2. Sea Level Rise Projections.

Datum: Feet NAVD88		
Year	NOAA2017 INT-LOW(FT)	NOAA2017 INT-HIGH (FT)
2040	0.76	1.38
2070	1.31	3.31

Tidal Datums and Tidal Flooding

Tidal datums and tidal flooding data was obtained for the South Port Everglades station (ID: 8722956) from the NOAA Tides and Currents website. A mean higher high water (MHHW) level of 0.57 feet NAVD88 was obtained from the station. A flood threshold of 1.74 feet above MHHW is identified by NOAA as the minor flood threshold at the Virginia Key, Biscayne Bay, FL and was assumed for the Town.

Storm Surge

Storm surge data was sourced from the National Hurricane Center's Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model. The data collected is the maximum of the maximum envelope of high water (MEOW), or (MOM), which provides a worst-case scenario for each category storm under "perfect" storm conditions. A Category Five – High water surface elevation of 6.70 feet NAVD88 was obtained for this assessment.

Land Use Data

To account for current and future land use changes, data was collected from the South Florida Water Management District (SFWMD). By using for future land use, potential changes to inundation depths can be accounted for.

FEMA FIRM Information

FEMA flood insurance rate maps (FIRMs) were obtained for the Town and show Special Flood Hazard Areas (SFHAs) – areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. ***Figure 3*** shows the FEMA SFHAs within the Town.

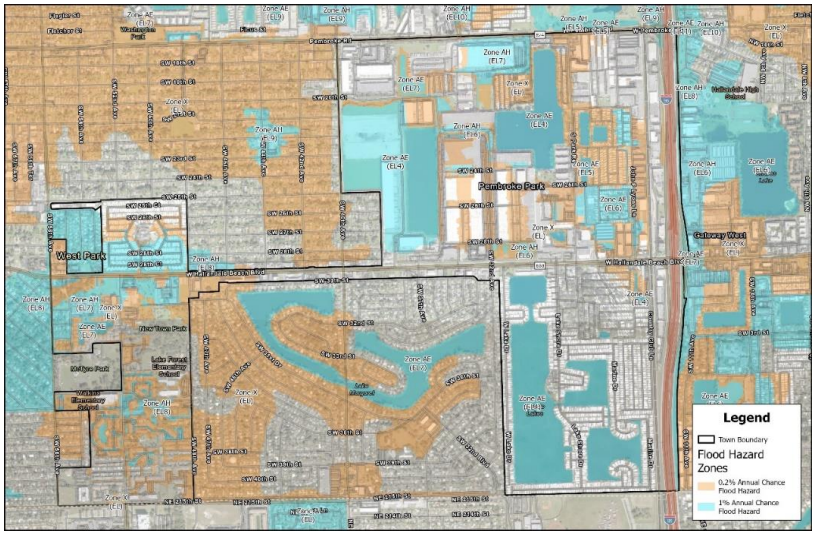


Figure 3. FEMA FIRM 100-Year Floodplain, Effective August 2014

4.3 DATA GAP ANALYSIS

Kimley-Horn conducted a data gap analysis of the provided information to check for completeness and applicability of the data. The data gap analysis performed indicated that missing data includes:

- Finished floor elevation for Town buildings.
    - In lieu of this data from as-builts or survey, the minimum elevation from the 2018 Digital Elevation Model within the asset footprint will be extracted using the Zonal Statistics GIS tool. For any finished structure, the slab-on-grade elevation will be assumed to be the minimum DEM elevation plus 1-foot. An example is shown in the figure below.

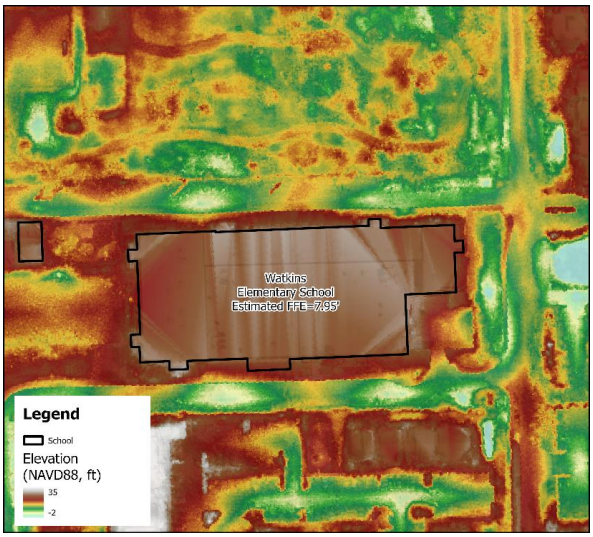


Figure 4. Estimated FFE for Watkins Elementary School using Zonal Statistics method.

Kimley»Horn

1. Critical/ Regionally Significant Assets Inventory								
Ref No.	Data Type	Asset Category	Name	Description	From	Data Received/ Data Downloaded	File Name	File Location
1.1	SHP	Transportation Assets and Evacuation Routes	MajorRoadways	Line feature class of roads in Pembroke Park including SW 52nd Ave, W Hallandale Beach Blvd, I95, Lake Shore Dr, SW 32nd Ave, W Lake Ave, John P Lyons Lane, SW 30th Ave	Town of Pembroke Park	1/30/2024	Streets	" K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection \1.Transportation Assets and Evacuation Routes\Streets"
1.2	SHP		BusStops	Point shapefiles for all 30 bus stops locations in Pembroke Park	Town of Pembroke Park	1/30/2024	Bus_stops	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\1.Transportation Assets and Evacuation Routes\bus_stops.shp"
1.3	SHP		Bridges	A point shapefile of the I-95 bridge within Pembroke Park boundary	FDOT	1/30/2024	Bridge	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\1.Transportation Assets and Evacuation Routes\Bridge.shp"
1.4	SHP		Railroad	SOL Railroad	ArcGIS Enterprise	1/30/2024	Railroad	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\1.Transportation Assets and Evacuation Routes\ Railroad"
1.5	SHP		Evacuation Route	A line feature class of Broward County Evacuation Routes	Broward County	1/30/2024	Broward_County_Evacuation_Routes	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\1.Transportation Assets and Evacuation Routes\ Broward_County_Evacuation_Routes"
2.1	SHP	Critical Infrastructure	Water Utility Conveyance Systems	A line feature class of sewer lines within Pembroke Park	Town of Pembroke Park	1/30/2024	WaterUtilityConvSyst	" K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\From_Others \2.Critical Infrastructure\WaterUtilityConvSyst"
2.2	SHP		Lift Stations	Point files of locations of lift stations around Pembroke Park	Town of Pembroke Park	1/30/2024	Lift Station	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\2.Critical Infrastructure\Lift Station "
2.3	SHP		DisasterDebrisManagementSite	A point shapefile including the solid waste disaster debris management sites	Broward County	1/30/2024	DisasterDebrisManagementSites	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\2.Critical Infrastructure\ DisasterDebrisManagementSites"
2.4	SHP		DisasterDebrisManagementSite(Poly)	A polygon shapefile that includes solid waste disaster debris management site buildings	Broward County	1/30/2024	DisasterDebrisManagementSitesPoly	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\2.Critical Infrastructure\ DisasterDebrisManagementSitePoly"
2.5	SHP		CommunicationFacilities(BroadcastingStudio)	A polygon shapefile of existingTV Broadcasting Studio	Town of Pembroke Park	1/30/2024	CommunicationFaciliies	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\2.Critical Infrastructure\Structures.shp"
3.1	SHP	Critical Community and Emergency Facility	EmergencyOperationCenters	Point files of the locations of EOCs in Broward County	Broward County	1/30/2024	Emergency_Operation_Centers	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\3.Critical Community and Emergency Facility\Emergency_Operation_Centers"

3.3	SHP		LawEnforcementFacility	Polygon shapefile of the sheriffs building in Town of Pembroke Park	Town of Pembroke Park	1/30/2024	Law Enforcement Facility	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\3.Critical Community and Emergency Facility\Law Enforcment Facility"
3.4	SHP		Schools	A polygon shapefile of schools within the Town of Pembroke Park	Town of Pembroke Park	1/30/2024	Schools	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\3.Critical Community and Emergency Facility\Schools"
3.5	SHP		LocalGovernmentFacility	A polygon shapefile of City Hall	Town of Pembroke Park	1/30/2024	Local Government Facility	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\3.Critical Community and Emergency Facility\LocalGovernmentFacility"
3.6	SHP		Assisted Living Facility	A polygon feature class of the Assisted Living Facility within the Town limits	Town of Pembroke Park	2/19/2024	AssistedLivingFacility	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\3.Critical Community and Emergency Facility\AssistedLivingFacility"
4.1	SHP	Natural, Cultural, and Historical Assets	Parks	Polygon shapefile of parks in Broward County	Broward County	1/30/2024	Broward_County_City_Parks	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\4.Natural, Cultural, & Historical Assets\Broward_County_City_Parks"
4.2	SHP		Surface Water	Polygon shapefile of the surface waterbodies in Broward County	Broward County	1/30/2024	Waterbody	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\4.Natural, Cultural, & Historical Assets\Waterbody"
5.1	SHP	Boundary	PembrokePark_Boundary	Polygon shapefile of the Town boundary	Pembroke Park GIS	1/30/2024	PembrokePark_Boundary	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\5.Boundary\PembrokePark_Boundary "
2. Topographic Data								
6.1	TIF	2018 USGS/NRCS Lidar 1m DEM: Southeast Florida dataset		Lidar collected from 2018	NOAA	1/30/2024	mosaic_ft	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\6.DEM "

3. Flood-Scenario Related Data

Scenario	100YR,24HR	500YR,24HR	Current Condition	Intermediate-Low (IL2040)	Intermediate-High (IH) 2040	IL2070	IH2070	From	Data Downloaded	File Name	File Location
Precipitation Data	15.4	21.1	-	-	-	-	-	NOAA Atlas 14	2/8/2024	Precipitation Frequency Data Server	K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\7.Scenarios
Groundwater level data	-	-	-	-	-	-	-	USGS NWIS Mapper	2/19/2024	NWISMapperExport.shp	K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\8. Groundwater Data
Sea Level Rise Projections	-	-	-	0.76	1.38	1.31	3.31	NOAA/Southeast Florida Regional Climate Compact	2/8/2024	SEFRCCC_Unified SLR Projection.pdf	K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\7.Scenarios
Tidal Flooding	-	-	2.31	3.07	3.69	3.62	5.62	NOAA Tides and Datums	2/8/2024	NOAATidal.pdf	K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\7.Scenarios
Storm Surge	-	-	6.70	7.46	8.08	8.01	10.01	SLOSH	2/8/2024	SLOSH	"K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\7.Scenarios\SLOSH"
Land Use	-	-	-	-	-	-	-	SFWMD	2/13/2024	SFWMD_LCLU_2017_2019	K:\FTL_GIS\00_Project_Files\HH_143586004 - Pembroke Park VA\Data\Data Collection\9. LULC

APPENDIX C

FEMA FIRM PANELS

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded tenth-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in preparation of this map was Transverse Mercator State Plane Florida East FIPS 0901. The **horizontal datum** was NAD83 HARN, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in preparation of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey **at (301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by Broward County. The original orthophotographic base imagery was provided in color with a one-foot pixel resolution at a scale of 1" = 300' from photography flown in 2008.

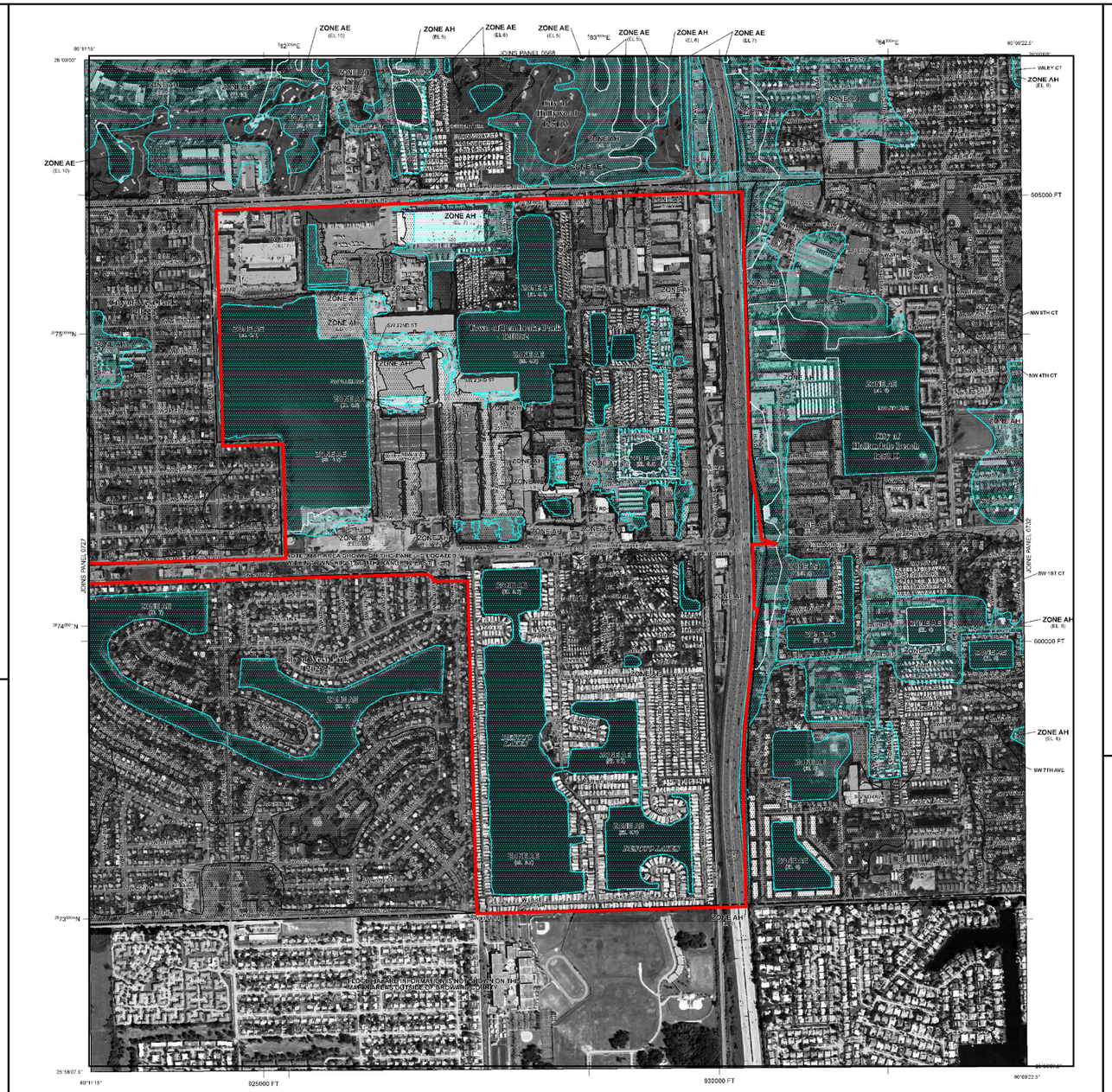
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange** at 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

The **"profile base lines"** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile base line, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.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NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in preparation of this map was Transverse Mercator State Plane Florida East FIPS 0901. The **horizontal datum** was NAD83 HARN, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the **same vertical datum**. For information regarding **conversion between** National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current **elevation, description, and/or location information for bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by Broward County. The original orthophotographic base imagery was provided in color with a one-foot pixel resolution at a scale of 1" = 400' from photography flown in 2008.

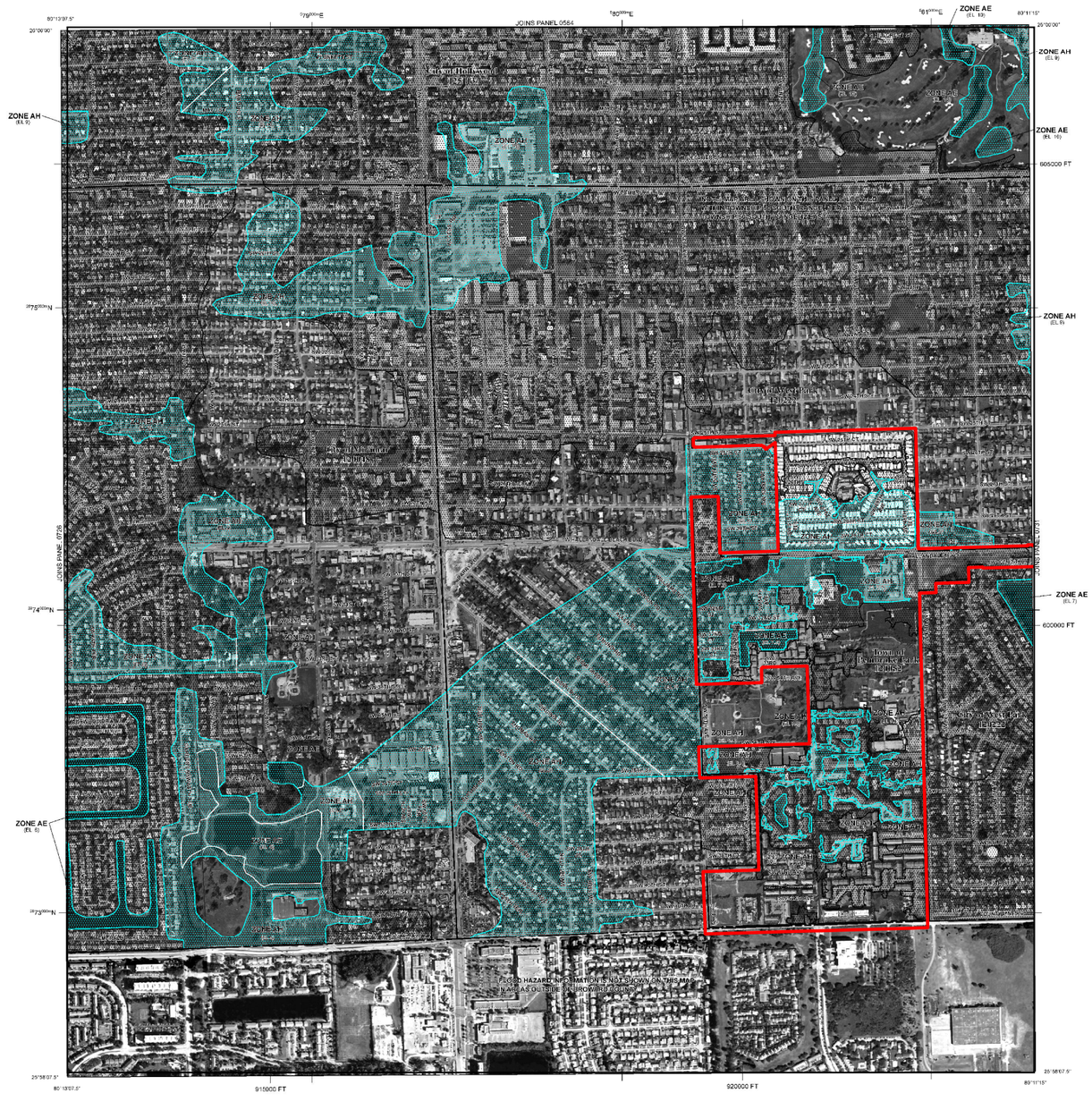
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from this website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

The **"profile base lines"** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile base line, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- 513 (EL 987) — Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- (A) — (A) Cross section line
- (23) — (23) Transect line
- 97°07'30", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4275000 E — 1000-meter Universal Transverse Mercator grid ticks, zone 17
- 6000000 FT — 5000-foot grid values: Florida State Plane coordinate system, East Zone (FIPSZONE = 0901), Transverse Mercator projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORIES
Refer to Map Repositories List on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 18, 2014

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

PANEL 0727H

FIRM

FLOOD INSURANCE RATE MAP
BROWARD COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 727 OF 751
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HOLLYWOOD, CITY OF	125113	0727	H
MIRAMAR, C T Y O*	120048	0727	H
PEMBROKE PARK, TOWN O*	120052	0727	H
WEST PARK, CITY OF	120222	0727	H

Notice to User: The **Map Number** shown below should be used when placing flood insurance. The **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
12011C0727H

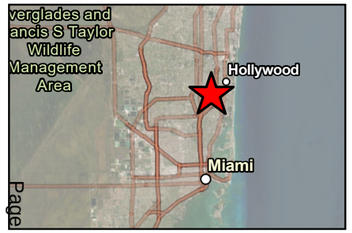
EFFECTIVE DATE
AUGUST 18, 2014

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

APPENDIX D

EXPOSURE ANALYSIS INUNDATION MAPS



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

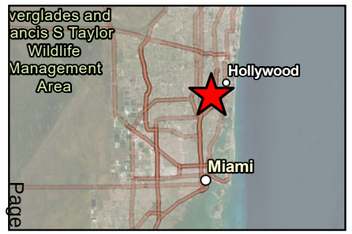
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-1



Legend

- Town Boundary

Transportation Assets and Evacuation Route
- Major Roadway
- Railroad

Critical Infrastructure
- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets
- Park
- Surface Water

Flood Depth (ft)
- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

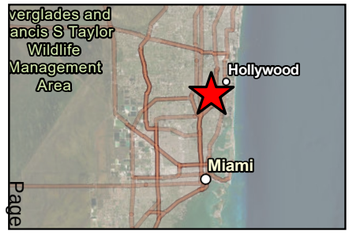
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100YR24HR + INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-2



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

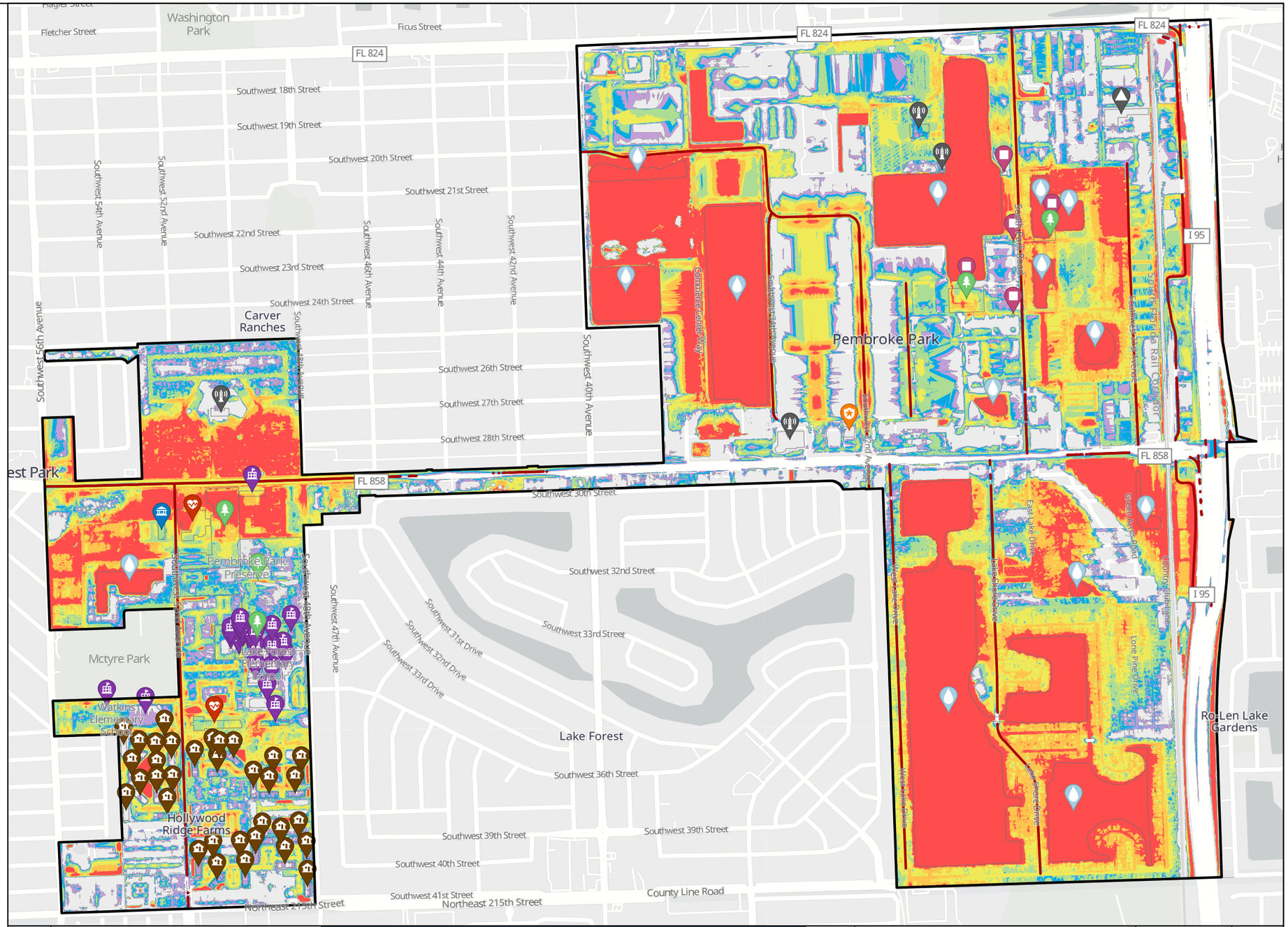
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



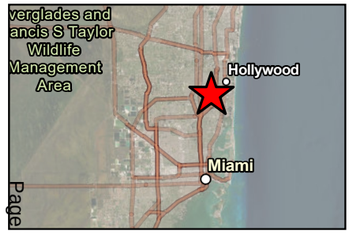
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100YR24HR + INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-3



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

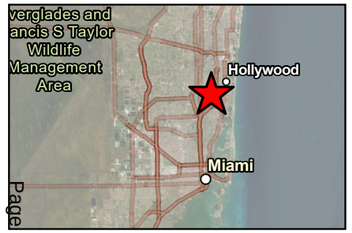
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100YR24HR + INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-4



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

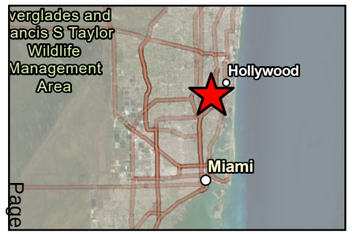
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100YR24HR + INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-5



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

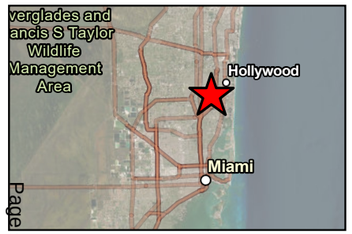
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-6



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

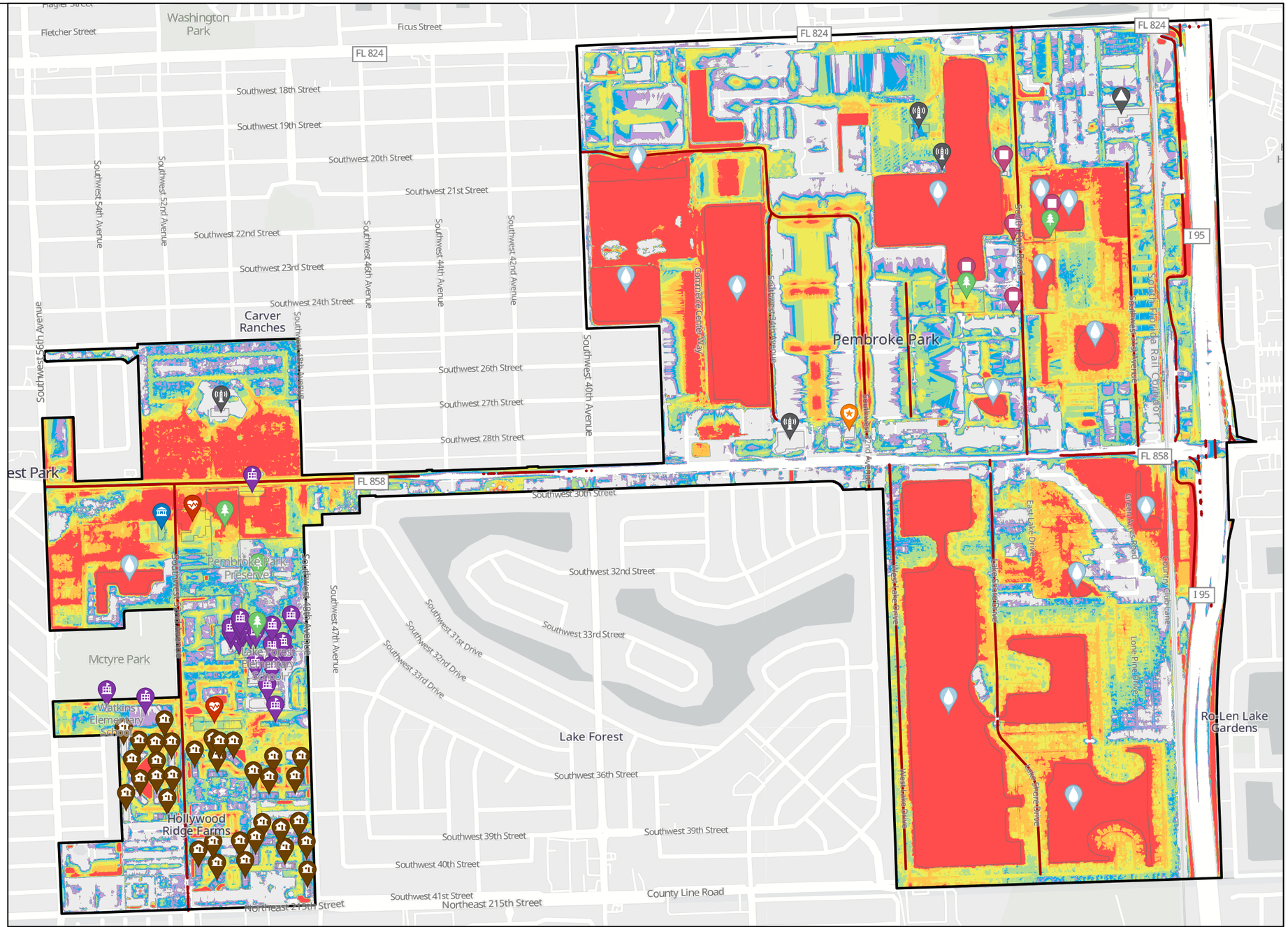
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



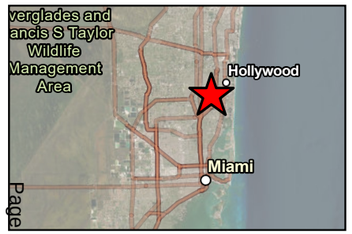
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500YR24HR + INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-7



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

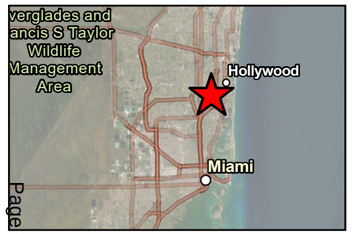
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500YR24HR + INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-8



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

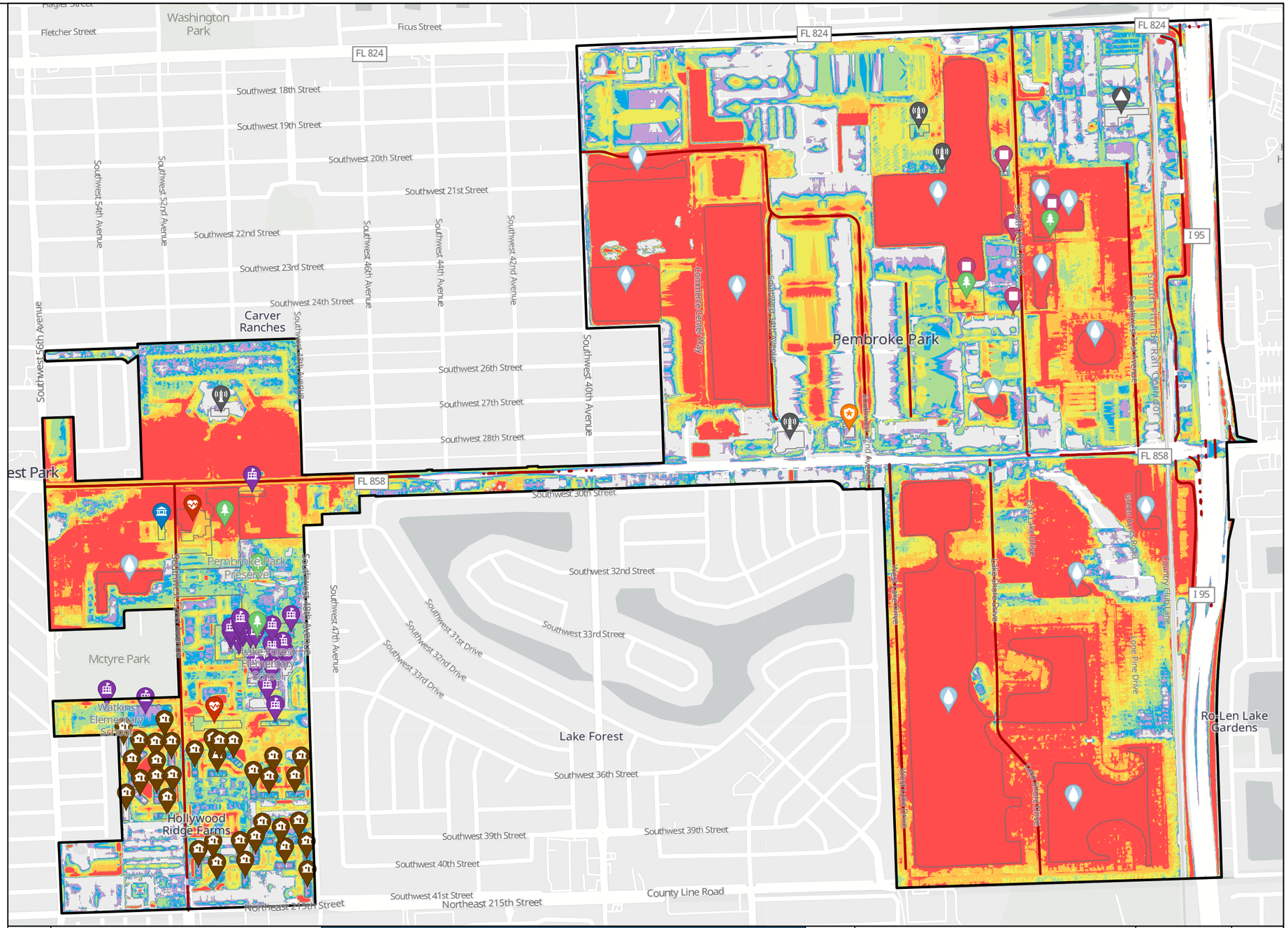
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



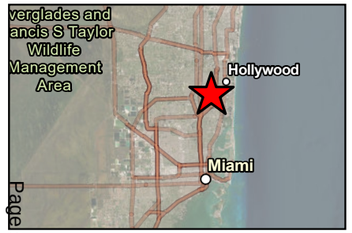
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500YR24HR + INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-9



Legend

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

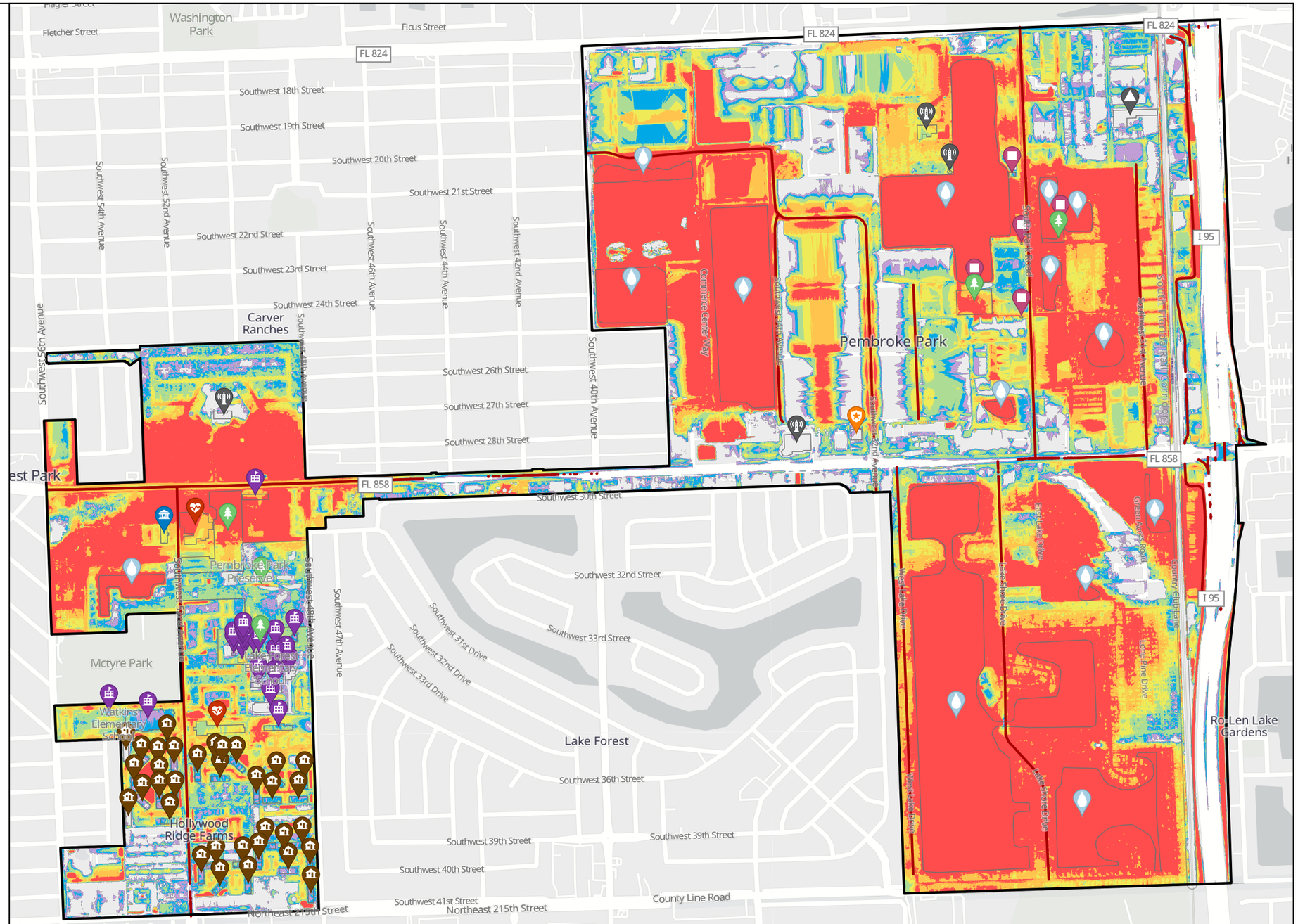
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



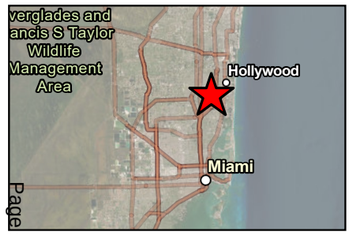
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500YR24HR + INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-10



Legend

Town Boundary

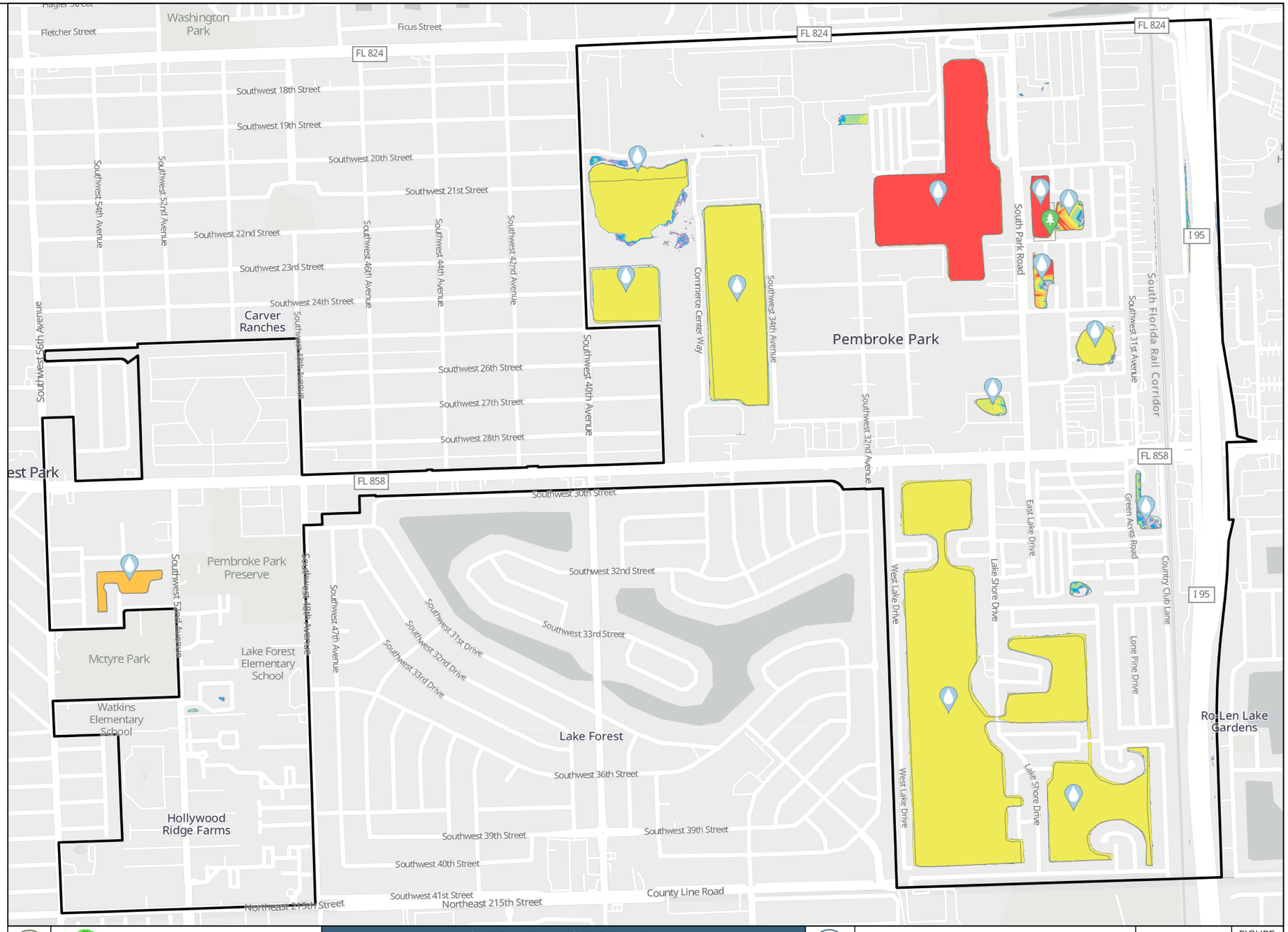
Natural, Cultural, and Historical Assets

Park

Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



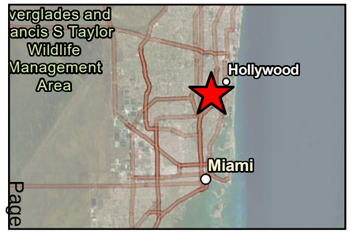
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

CURRENT KING TIDE WITH NOAA MINOR FLOODING THRESHOLD

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-1



Legend

- Town Boundary

Critical Infrastructure

- Pump Station

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

Washington Park
Fletcher Street
Ficus Street
FL 824
Southwest 18th Street
Southwest 19th Street
Southwest 20th Street
Southwest 21st Street
Southwest 22nd Street
Southwest 23rd Street
Southwest 24th Street
Southwest 54th Avenue
Southwest 52nd Avenue
Southwest 46th Avenue
Southwest 44th Avenue
Southwest 42nd Avenue
Southwest 40th Avenue
Carver Ranches
Southwest 26th Street
Southwest 27th Street
Southwest 28th Street
Commerce Center Way
Southwest 34th Avenue
Pembroke Park
South Park Road
Southwest 31st Avenue
South Florida Rail Corridor
I 95
FL 858
Southwest 30th Street
Southwest 32nd Street
Southwest 33rd Street
Southwest 31st Drive
Southwest 32nd Drive
Southwest 33rd Drive
Southwest 47th Avenue
Pembroke Park Preserve
Mctyre Park
Lake Forest Elementary School
Watkins Elementary School
Hollywood Ridge Farms
Lake Forest
Southwest 36th Street
Southwest 39th Street
Southwest 40th Street
Southwest 41st Street
Northeast 215th Street
County Line Road
East Lake Drive
Green Acres Road
Country Club Lane
Lake Shore Drive
West Lake Drive
Lone Pine Drive
Ro-Len Lake Gardens

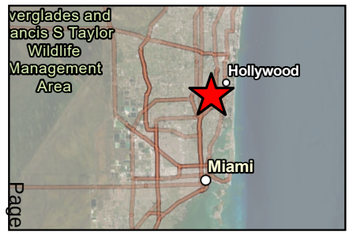
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-2



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway

Critical Infrastructure

- Pump Station

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

Washington Park
Fletcher Street
Ficus Street
FL 824
Southwest 18th Street
Southwest 19th Street
Southwest 20th Street
Southwest 21st Street
Southwest 22nd Street
Southwest 23rd Street
Southwest 24th Street
Southwest 54th Avenue
Southwest 52nd Avenue
Southwest 46th Avenue
Southwest 44th Avenue
Southwest 42nd Avenue
Carver Ranches
Southwest 26th Street
Southwest 27th Street
Southwest 28th Street
Southwest 40th Avenue
Commerce Center Way
Southwest 34th Avenue
Pembroke Park
South Park Road
Southwest 31st Avenue
South Florida Rail Corridor
I 95
FL 858
Southwest 30th Street
Southwest 32nd Avenue
East Lake Drive
Green Acres Road
Country Club Lane
Pembroke Park Preserve
Southwest 32nd Street
Southwest 31st Drive
Southwest 32nd Drive
Southwest 33rd Drive
Southwest 33rd Street
Southwest 47th Avenue
West Lake Drive
Lake Shore Drive
Lone Pine Drive
Mctyre Park
Lake Forest Elementary School
Watkins Elementary School
Lake Forest
Southwest 36th Street
Ro-Len Lake Gardens
Hollywood Ridge Farms
Southwest 39th Street
Southwest 40th Street
Southwest 41st Street
Northeast 215th Street
County Line Road

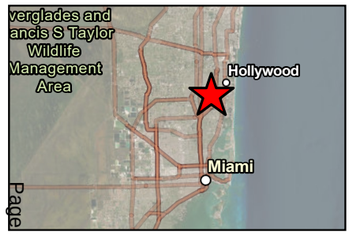
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-3



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway

Critical Infrastructure

- Pump Station

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

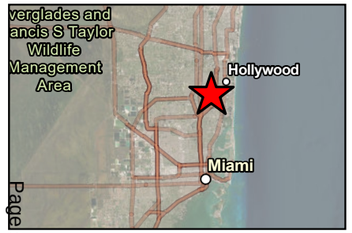
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-4



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway

Critical Infrastructure

- Communications Facility
- Pump Station

Critical Community and Emergency Facilities

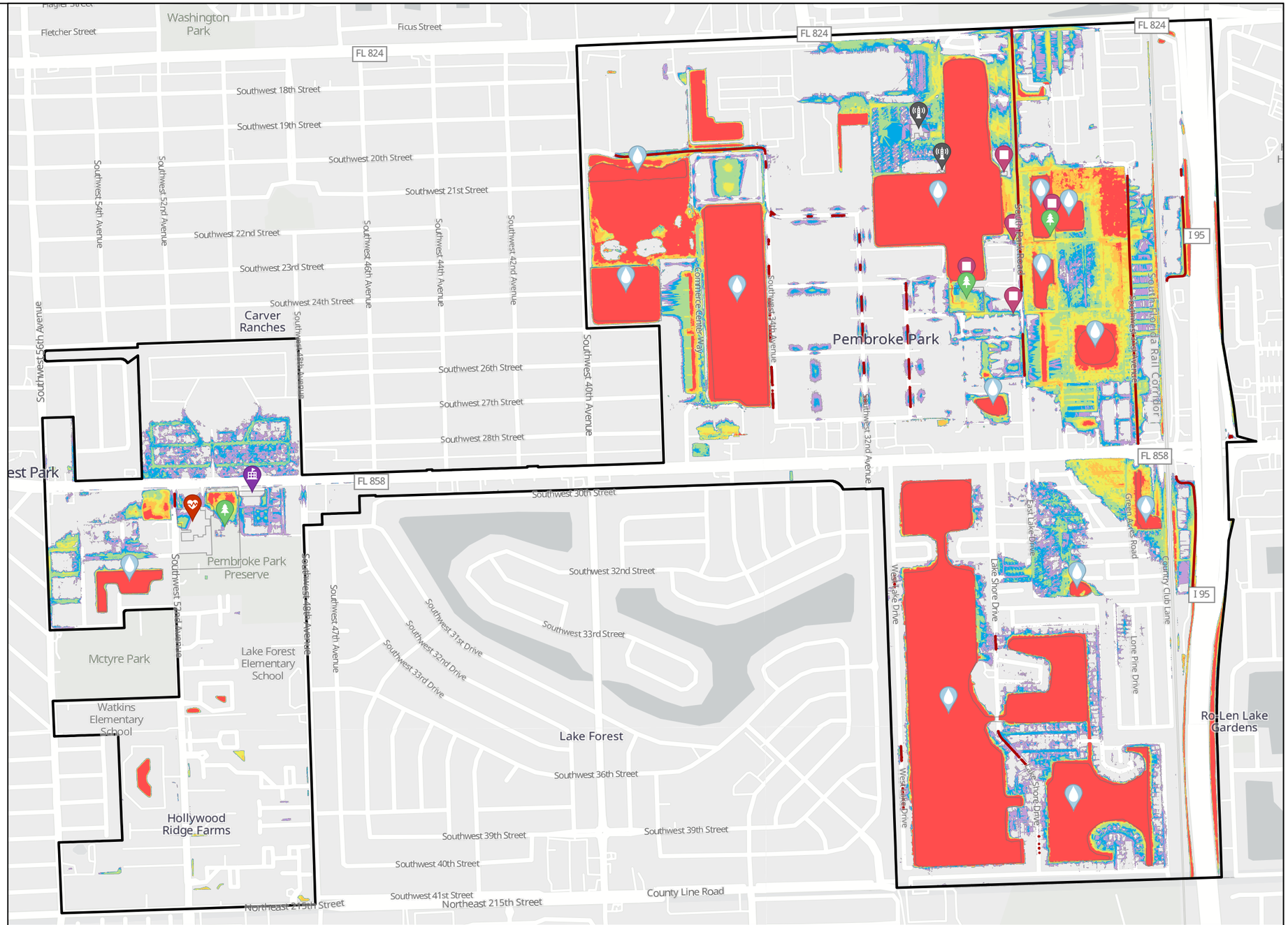
- Health Care Facility
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



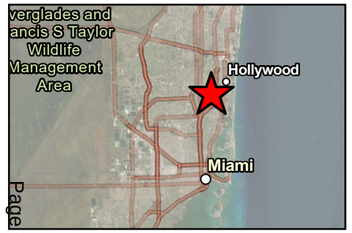
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-5



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station

Critical Community and Emergency Facilities

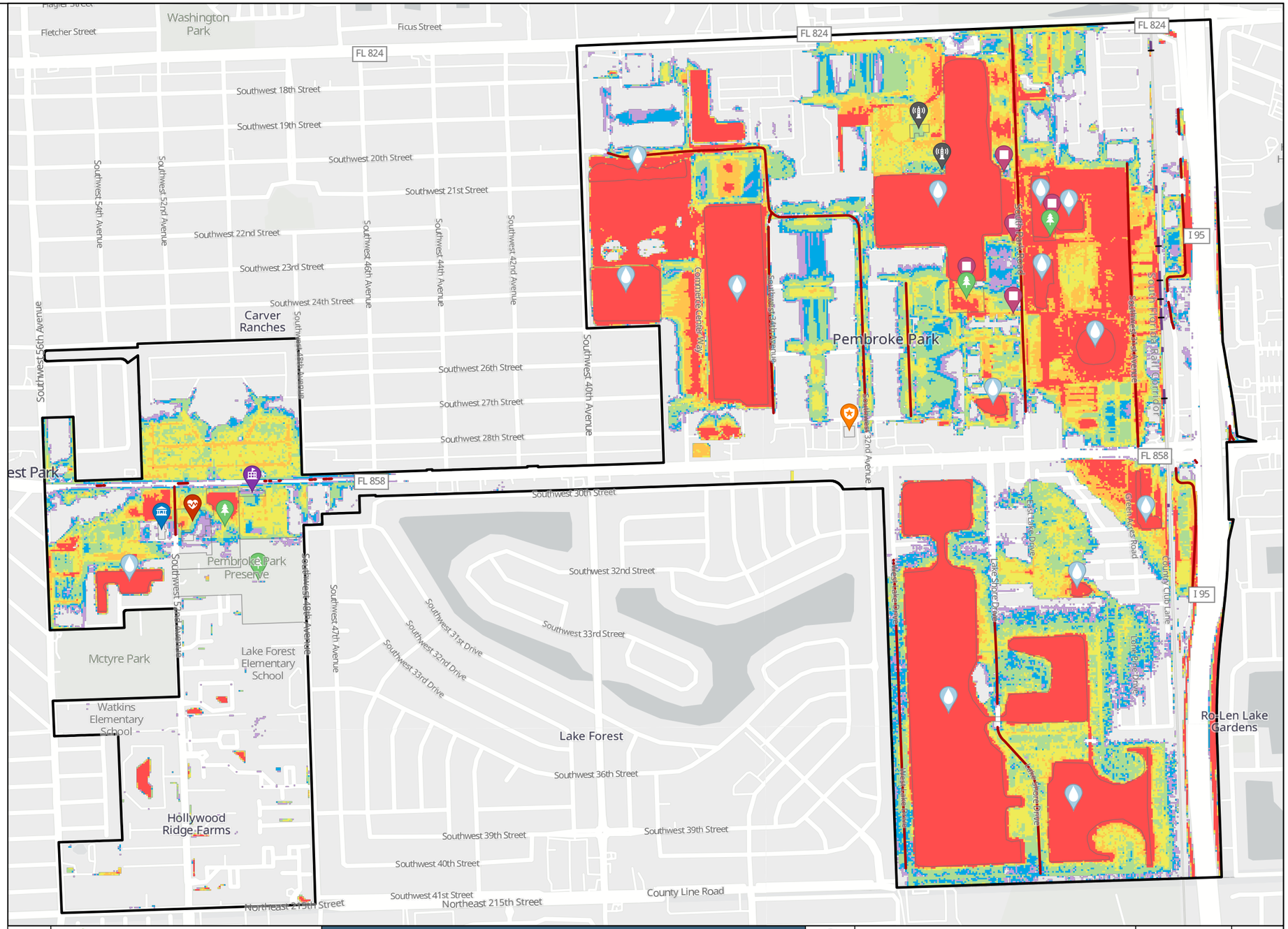
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



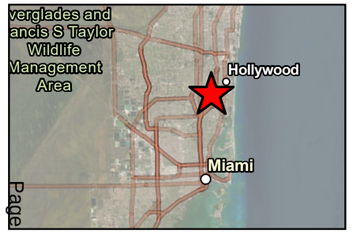
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

CURRENT STORM SURGE

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-1



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

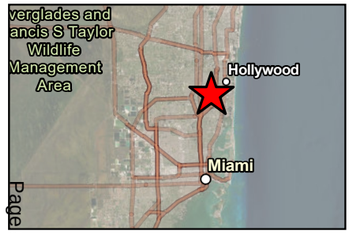
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-2



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

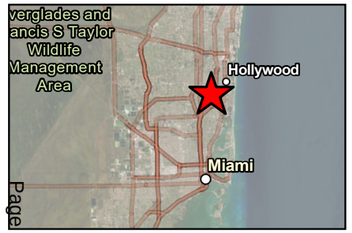
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-3



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

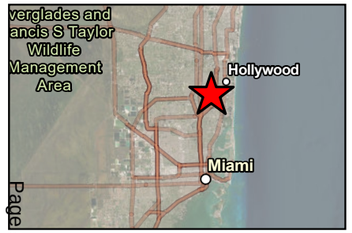
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Facility
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

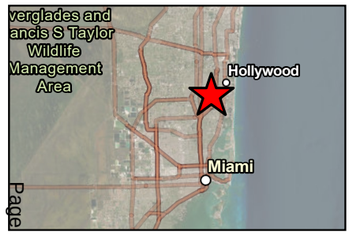
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-5



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

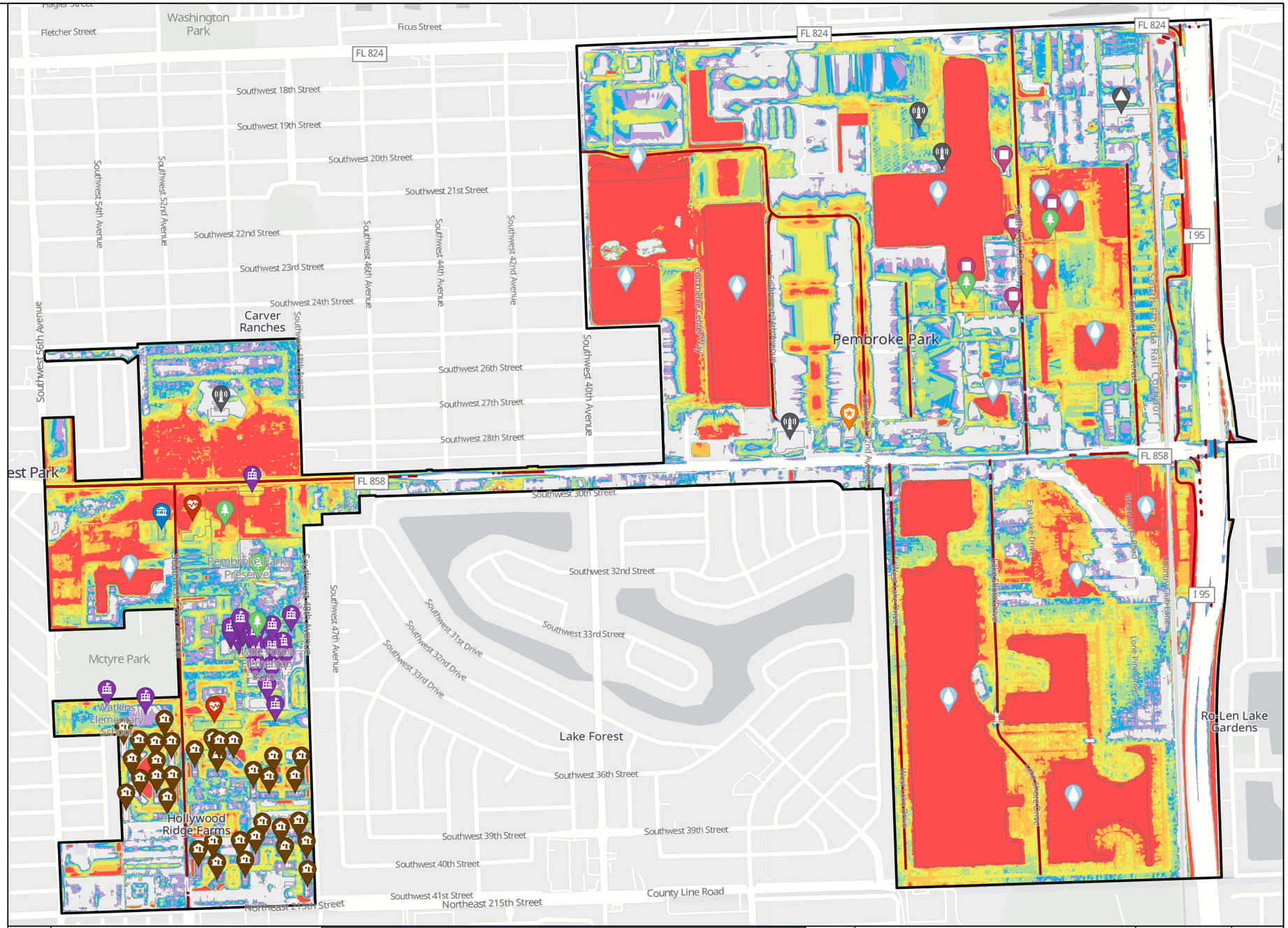
- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water



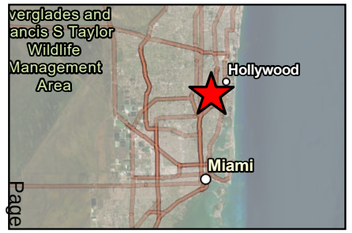
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR24HR + CURRENT KING TIDE

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-1



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

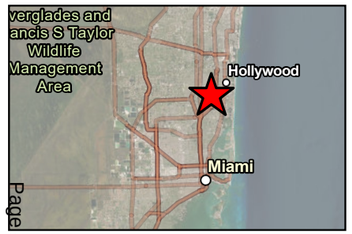
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-LOW 2040)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-2



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

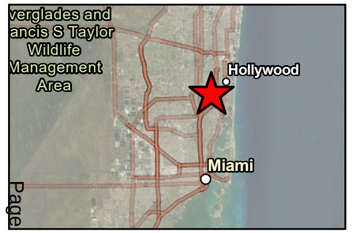
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-HIGH 2040)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-3



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0

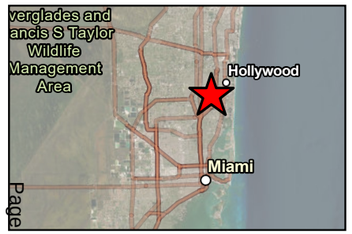
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-LOW 2070)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-4



Legend

- Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

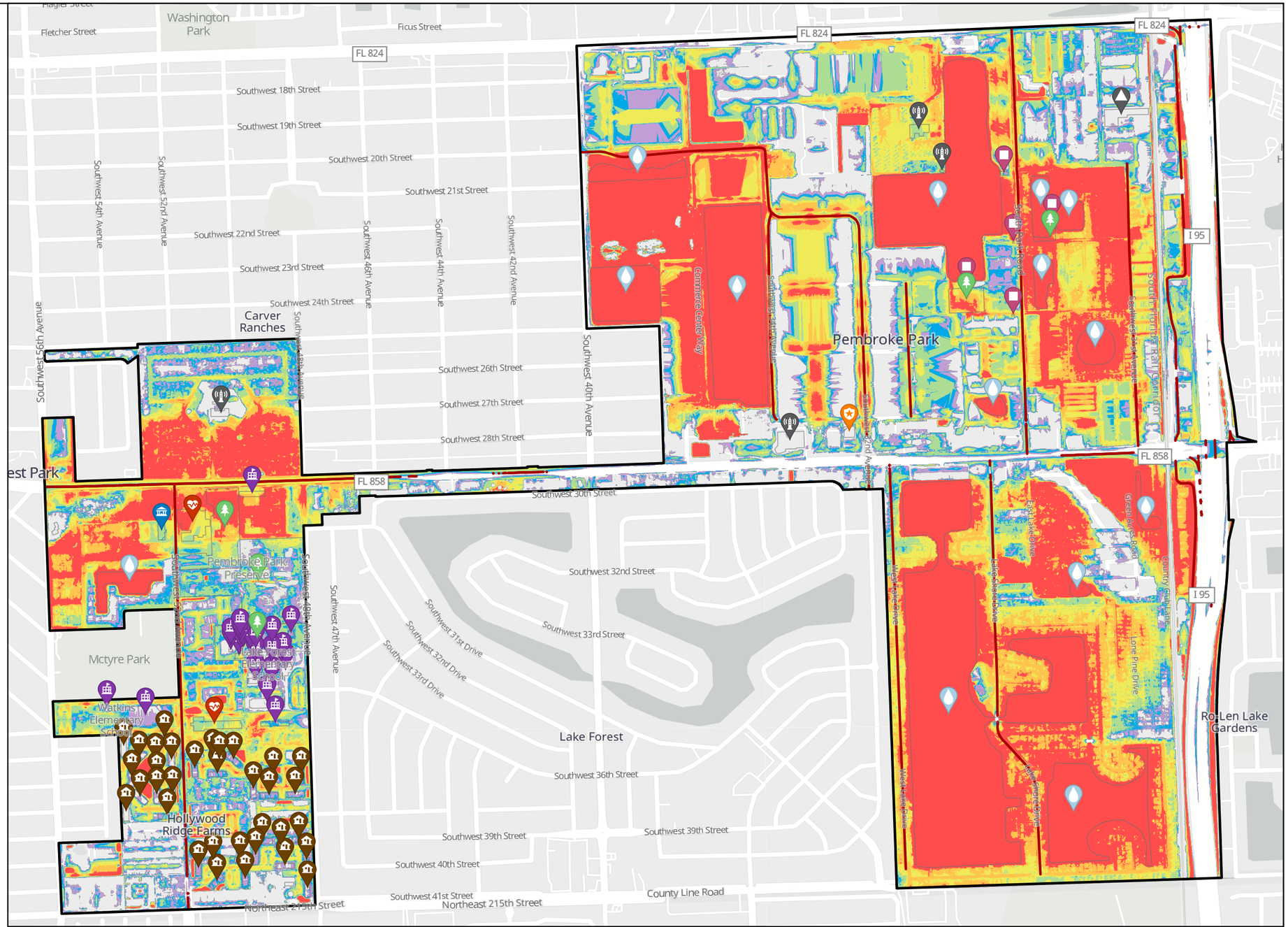
- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility & Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Flood Depth (ft)

- < 0.25
- 0.25 - 0.50
- 0.50 - 1
- 1.0 - 1.5
- 1.50 - 2
- > 2.0



TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-HIGH 2070)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-5

APPENDIX E

SENSITIVITY ANALYSIS PAIRED ASSET-THREAT MATRICES

Legend (Transportation Assets and Evacuation Routes)	
Low	Flooding < 0.5-ft
Medium	Flood depths greater than 0.5-ft and less than 2-ft
High	Permanent (SLR) flooding, flood depths >2-ft

Table E-1. Paired Asset-Threat Matrix for Tranportation Assets and Evacuation Routes

Asset Name	Asset Type	Scenario Criticality																								
		100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE	FUTURE KING TIDE IL2040	FUTURE KING TIDE IH2040	FUTURE KING TIDE IL2070	FUTURE KING TIDE IH2070	COMPOUND - 100YR + CURRENT KING TIDE	COMPOUND - 100YR + FUTURE KING TIDE IL2040	COMPOUND - 100YR + FUTURE KING TIDE IH2040	COMPOUND - 100YR + FUTURE KING TIDE IL2070	COMPOUND - 100YR + FUTURE KING TIDE IH2070
I95 RAMP	Major Roadways	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S PARK RD	Major Roadways	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	-	H	H	H	H	H
I95	Major Roadways	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW 20TH ST	Major Roadways	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	H	H	H	H	H	H
W LAKE DR	Major Roadways	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	M	H	H	H	H	H
LAKE SHORE DR	Major Roadways	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	H	H	H	H	H	H
SW 30TH AVE	Major Roadways	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	H	H	H	H	H	H
JOHN P LYONS LN	Major Roadways	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	M	M	H	H	H	H	H	H
SW 32ND AVE	Major Roadways	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	M	H	H	H	H	H
SW 34TH AVE	Major Roadways	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	M	H	H	H	H	H
SW 32ND TER	Major Roadways	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	-	-	-	-	M	M	M	M	M	M
SW 22ND ST	Major Roadways	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	L	H	H	H	H	H
SW 52ND AVE	Major Roadways	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	L	H	H	H	H	H
HALLANDALE BEACH BLVD	Major Roadways	M	M	M	M	M	M	M	M	M	M	M	M	H	M	H	-	-	-	-	-	M	M	M	M	M
Amtrak & Commuter	Rail Facilities	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	-	H	H	H	H	H

Legend (Critical Infrastructure)	
Low	Flooding < 0.5-ft
Medium	Flood depths greater than 0.5-ft and less than 2-ft
High	Permanent (SLR) flooding, flood depths >2-ft

Table E-2. Paired Asset-Threat Matrix for Critical Infrastructure

Asset Name	Asset Type	Scenario Criticality																						
		100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE	FUTURE KING TIDE IL2040	FUTURE KING TIDE IH2040	FUTURE KING TIDE IL2070	FUTURE KING TIDE IH2070	COMPOUND - 100YR + CURRENT KING TIDE	COMPOUND - 100YR + FUTURE KING TIDE IL2040	COMPOUND - 100YR + FUTURE KING TIDE IH2040	COMPOUND - 100YR + FUTURE KING TIDE IL2070	COMPOUND - 100YR + FUTURE KING TIDE IH2070
Communications Facility	Critical Infrastructure	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Communications Facility	Critical Infrastructure	L	L	L	L	L	L	L	L	L	L	-	-	-	-	L	-	-	-	-	-	L	L	L	L	L
Solid and Hazardous Waste Facility, Disaster Di	Critical Infrastructure	L	L	L	L	L	L	L	L	L	L	-	-	M	L	H	-	-	-	-	-	L	L	L	L	L
Pump Station	Critical Infrastructure	M	M	M	M	M	M	M	M	M	M	H	H	H	H	H	-	-	-	-	L	M	M	M	M	M
Pump Station	Critical Infrastructure	M	M	M	M	H	H	M	H	H	H	H	H	H	H	H	-	-	-	-	M	M	M	M	M	H
Pump Station	Critical Infrastructure	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	M	M	M	H	H	H	H	H	H
Pump Station	Critical Infrastructure	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	-	-	-	-	M	M	M	M	M	M
Pump Station	Critical Infrastructure	M	M	M	M	H	H	M	H	H	H	H	H	H	H	H	-	-	-	-	M	M	M	M	M	H
Communications Facility	Critical Infrastructure	H	H	H	H	H	H	H	H	H	H	M	M	H	H	H	-	-	-	-	L	H	H	H	H	H
Communications Facility	Critical Infrastructure	M	M	M	M	M	M	M	M	M	M	M	H	H	H	H	-	-	-	-	M	M	M	M	M	M
Communications Facility	Critical Infrastructure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	-	-	-	-	-	-	-

Legend (Critical Community and Emergency Facilities)	
Low	Flooding < 0.5-ft
Medium	Flood depths greater than 0.5-ft and less than 2-ft
High	Permanent (SLR) flooding, flood depths >2-ft

Table E-3. Paired Asset-Threat Matrix for Critical Community and Emergency Facilities

Asset Name	Asset Type	Scenario Criticality																							
		100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE	FUTURE KING TIDE IL2040	FUTURE KING TIDE IH2040	FUTURE KING TIDE IL2070	FUTURE KING TIDE IH2070	COMPOUND - 100YR + CURRENT KING TIDE	COMPOUND - 100YR + FUTURE KING TIDE IL2040	COMPOUND - 100YR + FUTURE KING TIDE IH2040	COMPOUND - 100YR + FUTURE KING TIDE IL2070	COMPOUND - 100YR + FUTURE KING TIDE IH2070
The Peninsula Assisted Living & Memory Care	Health Care Facility	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	M	H	H	H	H	H
Plaza of Hallendale Beach Assisted Living	Health Care Facility	M	M	M	M	M	M	M	M	M	M	-	M	M	M	H	-	-	-	-	-	M	M	M	M	M
Mimis Learning Center	School	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	-	H	H	H	H	H
Pembroke Park Montessori School	School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	-	-	-	-	-	-	-
Broward County Sheriff's Dept. District 1	Law Enforcement Facility	L	L	L	L	L	M	L	M	M	M	-	-	M	M	H	-	-	-	-	-	L	L	L	L	L
Government - City Hall	Local Government Facilities, Emergency Operation Center	M	M	M	M	M	M	M	M	M	M	L	M	M	M	H	-	-	-	-	-	M	M	M	M	M
Watkins Elementary - P.E. Building	School	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Watkins Elementary - Main Building	School	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Building 4	School	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Building 5	School	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Building 12	School	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Building 1	School	L	L	L	L	L	M	L	M	M	M	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Building 6	School	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Building 2	School	L	L	L	L	L	M	L	M	M	M	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	L	M	M	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Building 9	School	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	L	-	M	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	L	L	L	L	L	L	L	L	L	L	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	L	-	M	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - E of Gazebo	School	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - Portable Class	School	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Lake Forest Elementary School - NE of Playgro	School	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Point of Grace Christian Academy	School	M	M	M	M	M	M	M	M	M	M	-	L	M	M	H	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4803	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4805	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	-	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4801	Affordable Public Housing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	-	-	-	-	-	-	-
Pembroke Villas - 4807	Affordable Public Housing	L	L	L	L	L	M	L	M	M	M	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Pembroke Villas - 4809	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4811	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4813	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4815	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4001	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4009	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4007	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4003	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Villas - 4005	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3730	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3770	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3740	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3760	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3750	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3703	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3705	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3707	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - 3701	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Gardens - Poolhouse	Affordable Public Housing	L	L	L	L	L	M	L	M	M	M	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Pembroke Park Apts - 3706	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3708	Affordable Public Housing	L	L	L	L	L	L	L	L	L	L	-	-	L	L	H	-	-	-	-	-	L	L	L	L	L
Pembroke Park Apts - 3710	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	L	M	M	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3712	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3714	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	L	M	M	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3702	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	-	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3704	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	M	M	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3700	Affordable Public Housing	L	L	L	L	L	M	L	M	M	M	-	-	-	-	M	-	-	-	-	-	L	L	L	L	L
Pembroke Park Apts - 3720	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 5734	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	-	M	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3718	Affordable Public Housing	M	M	M	M	M	M	M	M	M	M	-	-	L	L	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Apts - 3716	Affordable Public Housing	L	L	L	L	L	M	L	M	M	M	-	-	L	L	H	-	-	-	-	-	L	L	L	L	L

Legend (Parks)	
Low	Flooding up to 25% by land area
Medium	Flooding greater than 25% and less than 75% by land area
High	Flooding greater than 75% by land area

Table E-4. Paired Asset-Threat Matrix for Natural, Cultural, and Historical Assets (Parks)

Asset Name	Asset Type	Scenario Criticality																								
		100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE	FUTURE KING TIDE IL2040	FUTURE KING TIDE IH2040	FUTURE KING TIDE IL2070	FUTURE KING TIDE IH2070	COMPOUND - 100YR + CURRENT KING TIDE	COMPOUND - 100YR + FUTURE KING TIDE IL2040	COMPOUND - 100YR + FUTURE KING TIDE IH2040	COMPOUND - 100YR + FUTURE KING TIDE IL2070	COMPOUND - 100YR + FUTURE KING TIDE IH2070
Patrick Behan Park	Park	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	-	H	H	H	H	H
Lake Forest Park	Park	M	M	M	M	M	M	M	M	M	M	-	L	M	M	H	-	-	-	-	-	M	M	M	M	M
Pembroke Park Preserve	Park	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	-	-	-	-	M	H	H	H	H	H
AJ Ryan Park	Park	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	-	-	-	H	H	H	H	H	H
Howard Clark Sr Linear Walkway	Park	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	-	M	H	H	H	H	H	H	H	H

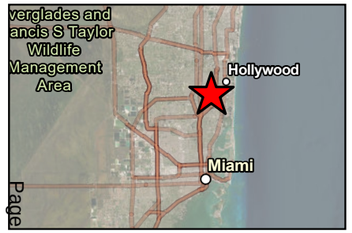
Legend (Surface Waters and Cultural/Historical Assets)	
Low	Flooding < 0.5-ft
Medium	Flood depths greater than 0.5-ft and less than 2-ft
High	Permanent (SLR) flooding, flood depths >2-ft

Table E-5. Paired Asset-Threat Matrix for Natural, Cultural, and Historical Assets (Surface Waters and Cultural/Historical Assets)

Asset Name	Asset Type	Scenario Criticality																								
		100Y72H	Projected - 100Y72H IL2040	Projected - 100Y72H IH2040	Projected - 100Y72H IL2070	Projected - 100Y72H IH2070	500Y72H	Projected - 500Y72H IL2040	Projected - 500Y72H IH2040	Projected - 500Y72H IL2070	Projected - 500Y72H IH2070	CURRENT STORM SURGE	STORM SURGE + IL2040	STORM SURGE + IH2040	STORM SURGE + IL2070	STORM SURGE + IH2070	CURRENT KING TIDE	FUTURE KING TIDE IL2040	FUTURE KING TIDE IH2040	FUTURE KING TIDE IL2070	FUTURE KING TIDE IH2070	COMPOUND - 100YR + CURRENT KING TIDE	COMPOUND - 100YR + FUTURE KING TIDE IL2040	COMPOUND - 100YR + FUTURE KING TIDE IH2040	COMPOUND - 100YR + FUTURE KING TIDE IL2070	COMPOUND - 100YR + FUTURE KING TIDE IH2070
840436	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
700013	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
699824	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
840440	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
840441	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H	H	H	H	H
697749	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
840434	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
700506	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
700039	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
840438	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
700787	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H	H	H	H	H
698034	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
Desoto Lakes	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	H	H	H	H	H
698255	Surface Water	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	M	H	H	H	H	H	H	H	H

APPENDIX F

SENSITIVITY ANALYSIS PAIRED ASSET-THREAT MAPS



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimi's Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
54 Pembroke Gardens - 3750
55 Pembroke Gardens - 3760
56 Pembroke Gardens - 3770
57 Pembroke Gardens - Poolhouse
58 Pembroke Park Apts - 3700
59 Pembroke Park Apts - 3702
60 Pembroke Park Apts - 3704
61 Pembroke Park Apts - 3706
62 Pembroke Park Apts - 3708
63 Pembroke Park Apts - 3710
64 Pembroke Park Apts - 3712
65 Pembroke Park Apts - 3714
66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

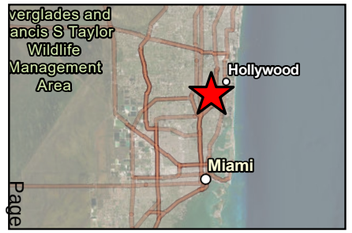
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-1



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
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26 WIMP TV UHF Channel 25

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33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
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69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

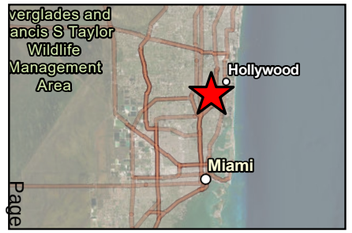
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT +INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-2



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
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23 Pump 5
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37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
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72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
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Natural, Cultural, and Historical Assets
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95 700506
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97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

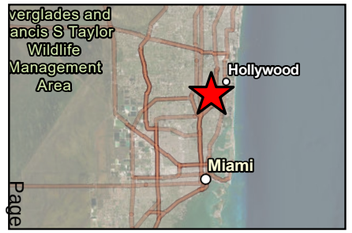
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT +INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-3



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
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22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
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26 WIMP TV UHF Channel 25

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36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
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74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
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78 Pembroke Villas - 4805
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80 Pembroke Villas - 4809
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101 840441
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103 Desoto Lakes
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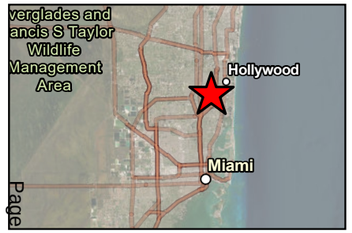
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT +INT-LOW 2070

Kimley»Horn

FIGURE A-4



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

Major Roadway

Railroad

Critical Infrastructure

Communications Facility

Pump Station

Disaster Debris Management Site

Critical Community and Emergency Facilities

Affordable Public Housing

Health Care Facility

Law Enforcement Faciliy

Local Government Facility, Emergency Operation Center

School

Natural, Cultural, and Historical Assets

Park

Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
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Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
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102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
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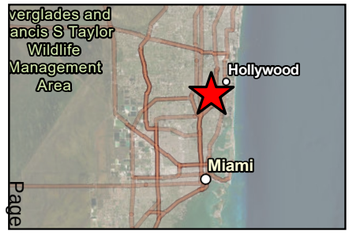
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
100-YEAR/24-HOUR EVENT +INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-5



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
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36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
54 Pembroke Gardens - 3750
55 Pembroke Gardens - 3760
56 Pembroke Gardens - 3770
57 Pembroke Gardens - Poolhouse
58 Pembroke Park Apts - 3700
59 Pembroke Park Apts - 3702
60 Pembroke Park Apts - 3704
61 Pembroke Park Apts - 3706
62 Pembroke Park Apts - 3708
63 Pembroke Park Apts - 3710
64 Pembroke Park Apts - 3712
65 Pembroke Park Apts - 3714
66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

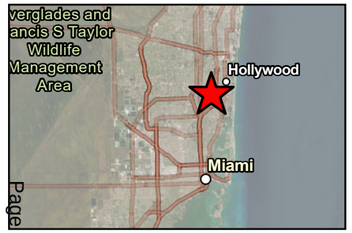
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-6



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
54 Pembroke Gardens - 3750
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56 Pembroke Gardens - 3770
57 Pembroke Gardens - Poolhouse
58 Pembroke Park Apts - 3700
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60 Pembroke Park Apts - 3704
61 Pembroke Park Apts - 3706
62 Pembroke Park Apts - 3708
63 Pembroke Park Apts - 3710
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65 Pembroke Park Apts - 3714
66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

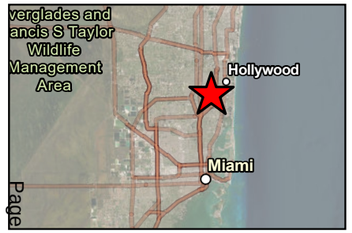
Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT +INT-LOW 2040

Kimley»Horn

FIGURE
A-7



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
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50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
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63 Pembroke Park Apts - 3710
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66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

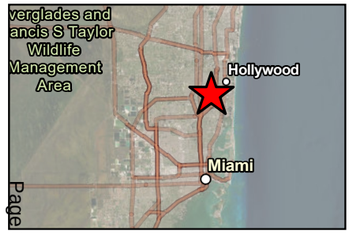
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT +INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE A-8



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
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57 Pembroke Gardens - Poolhouse
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70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

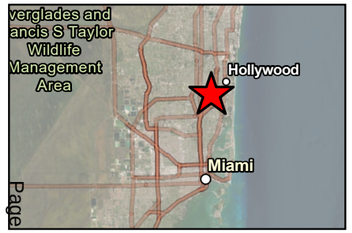
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT +INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE
B-4



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
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73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
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Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
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Natural, Cultural, and Historical Assets
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105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

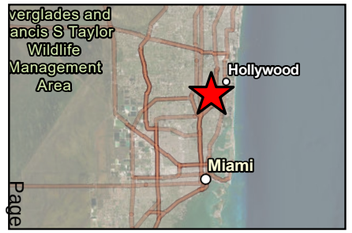
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

PROJECTED RAINFALL-INDUCED FLOODING
500-YEAR/24-HOUR EVENT +INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-5



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
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Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
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Critical Community and Emergency Facilities
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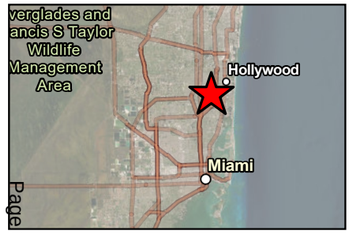
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

CURRENT KING TIDE WITH
NOAA MINOR FLOODING THRESHOLD

Kimley»Horn

FIGURE
B-1



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

Major Roadway

Railroad

Critical Infrastructure

Communications Facility

Pump Station

Disaster Debris Management Site

Critical Community and Emergency Facilities

Affordable Public Housing

Health Care Facility

Law Enforcement Faciliy

Local Government Facility, Emergency Operation Center

School

Natural, Cultural, and Historical Assets

Park

Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
54 Pembroke Gardens - 3750
55 Pembroke Gardens - 3760
56 Pembroke Gardens - 3770
57 Pembroke Gardens - Poolhouse
58 Pembroke Park Apts - 3700
59 Pembroke Park Apts - 3702
60 Pembroke Park Apts - 3704
61 Pembroke Park Apts - 3706
62 Pembroke Park Apts - 3708
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66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

Carver Ranches
Pembroke Park
Pembroke Park Preserve
Mctyre Park
Watkins Elementary School
Hollywood Ridge Farms
Lake Forest
Ro-Len Lake Gardens
FL 824
FL 858
I 95
Southwest 56th Avenue
Southwest 52nd Avenue
Southwest 48th Avenue
Southwest 46th Avenue
Southwest 42nd Avenue
Southwest 40th Avenue
Southwest 47th Avenue
Southwest 24th Street
Southwest 26th Street
Southwest 27th Street
Southwest 28th Street
Southwest 30th Street
Southwest 32nd Street
Southwest 33rd Street
Southwest 31st Drive
Southwest 32nd Drive
Southwest 33rd Drive
Southwest 36th Street
Southwest 39th Street
Southwest 40th Street
Southwest 41st Street
Northeast 215th Street
Commerce Center Way
Southwest 34th Avenue
Southwest 32nd Avenue
South Park Road
South Florida Rail Corridor
East Lake Drive
Green Acres Road
Country Club Lane
Lone Pine Drive
Westlake Drive
Lake Shore Drive
County Line Road

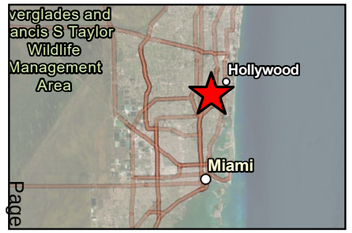
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-2



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
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23 Pump 5
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73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

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102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

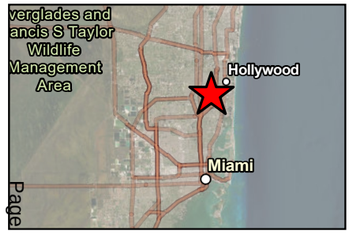
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-3



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

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Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
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73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
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88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

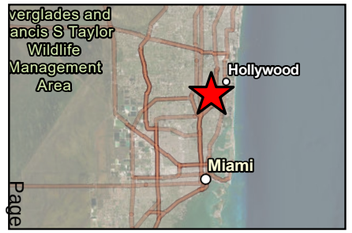
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-4



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
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36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
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70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

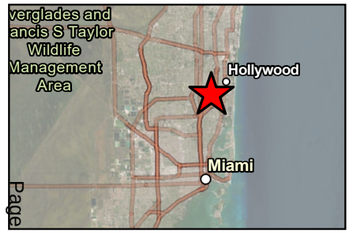
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

FUTURE KING TIDAL FLOODING WITH INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE B-5



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
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Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
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30 Lake Forest Elementary School - Portable Classroom 7
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Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
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106 Patrick Behan Park
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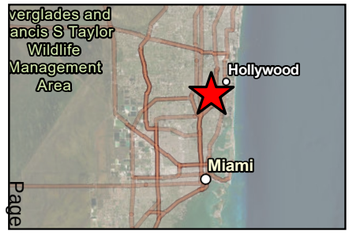
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

CURRENT STORM SURGE

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-1



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
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- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
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106 Patrick Behan Park
107 Pembroke Park Preserve

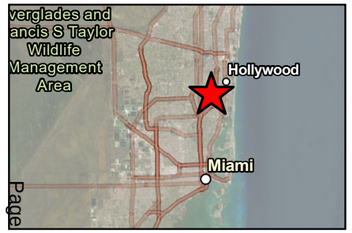
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-LOW 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-2



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
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52 Pembroke Gardens - 3730
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67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
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77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

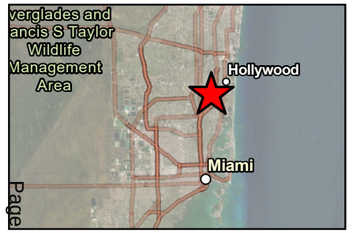
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-HIGH 2040

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-3



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
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26 WIMP TV UHF Channel 25

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Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
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42 Lake Forest Elementary School - Portable Classroom 3
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71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
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89 697749
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93 700013
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97 840434
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101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

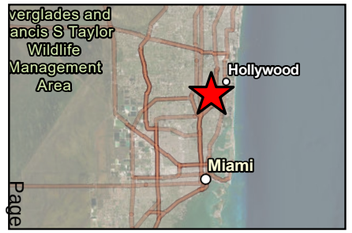
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-LOW 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-4



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
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106 Patrick Behan Park
107 Pembroke Park Preserve

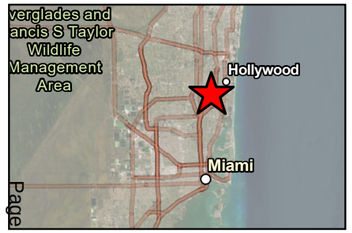
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

STORM SURGE WITH SLR INT-HIGH 2070

0 425 850 1,700 Feet

Kimley»Horn

FIGURE C-5



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
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Critical Infrastructure
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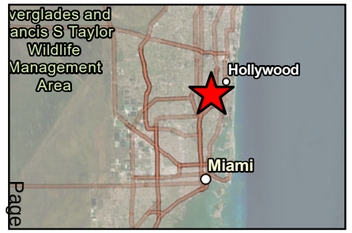
107 Pembroke Park Preserve

TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR24HR + CURRENT KING TIDE

Kimley»Horn

FIGURE D-1



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
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7 S PARK RD
8 SW 20TH ST
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15 W LAKE DR

Critical Infrastructure
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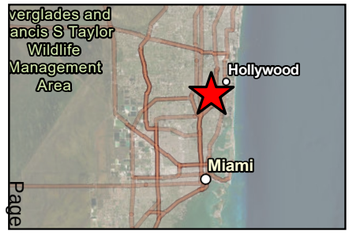
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-LOW 2040)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-2



Legend

Criticality

No Risk, Low, Medium, High

Town Boundary

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Critical Infrastructure

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105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

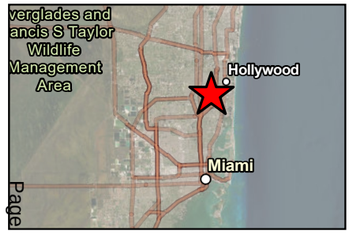
TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-HIGH 2040)

0 425 850 1,700 Feet

Kimley»Horn

FIGURE D-3



Legend

Criticality

No Risk · Low · Medium · High

Town Boundary

Transportation Assets and Evacuation Route

- Major Roadway
- Railroad

Critical Infrastructure

- Communications Facility
- Pump Station
- Disaster Debris Management Site

Critical Community and Emergency Facilities

- Affordable Public Housing
- Health Care Facility
- Law Enforcement Faciliy
- Local Government Facility, Emergency Operation Center
- School

Natural, Cultural, and Historical Assets

- Park
- Surface Water

Transportation Assets and Evacuation Routes
1 Amtrak & Commuter
2 HALLANDALE BEACH BLVD
3 I95
4 I95 RAMP
5 JOHN P LYONS LN
6 LAKE SHORE DR
7 S PARK RD
8 SW 20TH ST
9 SW 22ND ST
10 SW 30TH AVE
11 SW 32ND AVE
12 SW 32ND TER
13 SW 34TH AVE
14 SW 52ND AVE
15 W LAKE DR

Critical Infrastructure
16 Dale Village
17 Local 10
18 Pembroke Park Recycling and Transfer Center
19 Pump 1
20 Pump 2
21 Pump 3
22 Pump 4
23 Pump 5
24 Trinity Broadcasting - Miami
25 WHFT TV Transit Tower
26 WIMP TV UHF Channel 25

Critical Community and Emergency Facilities
27 Broward County Sheriff's Dept. District 1
28 Government - City Hall
29 Lake Forest Elementary School - Portable Classroom 5
30 Lake Forest Elementary School - Portable Classroom 7
31 Lake Forest Elementary School - Building 1
32 Lake Forest Elementary School - Building 12
33 Lake Forest Elementary School - Building 2
34 Lake Forest Elementary School - Building 4
35 Lake Forest Elementary School - Building 5
36 Lake Forest Elementary School - Building 6
37 Lake Forest Elementary School - Building 9

Critical Community and Emergency Facilities
38 Lake Forest Elementary School - E of Gazebo
39 Lake Forest Elementary School - NE of Playground
40 Lake Forest Elementary School - Portable Classroom 1
41 Lake Forest Elementary School - Portable Classroom 2
42 Lake Forest Elementary School - Portable Classroom 3
43 Lake Forest Elementary School - Portable Classroom 4
44 Lake Forest Elementary School - Portable Classroom 6
45 Lake Forest Elementary School - Portable Classroom 8
46 Lake Forest Elementary School - Portable Classroom 9
47 Mimis Learning Center
48 Pembroke Gardens - 3701
49 Pembroke Gardens - 3703
50 Pembroke Gardens - 3705
51 Pembroke Gardens - 3707
52 Pembroke Gardens - 3730
53 Pembroke Gardens - 3740
54 Pembroke Gardens - 3750
55 Pembroke Gardens - 3760
56 Pembroke Gardens - 3770
57 Pembroke Gardens - Poolhouse
58 Pembroke Park Apts - 3700
59 Pembroke Park Apts - 3702
60 Pembroke Park Apts - 3704
61 Pembroke Park Apts - 3706
62 Pembroke Park Apts - 3708
63 Pembroke Park Apts - 3710
64 Pembroke Park Apts - 3712
65 Pembroke Park Apts - 3714
66 Pembroke Park Apts - 3716
67 Pembroke Park Apts - 3718
68 Pembroke Park Apts - 3720
69 Pembroke Park Apts - 5734
70 Pembroke Park Montessori School
71 Pembroke Villas - 4001
72 Pembroke Villas - 4003
73 Pembroke Villas - 4005
74 Pembroke Villas - 4007
75 Pembroke Villas - 4009

Critical Community and Emergency Facilities
76 Pembroke Villas - 4801
77 Pembroke Villas - 4803
78 Pembroke Villas - 4805
79 Pembroke Villas - 4807
80 Pembroke Villas - 4809
81 Pembroke Villas - 4811
82 Pembroke Villas - 4813
83 Pembroke Villas - 4815
84 Plaza of Hallendale Beach Assisted Living
85 Point of Grace Christian Academy
86 The Peninsula Assisted Living & Memory Care
87 Watkins Elementary - Main Building
88 Watkins Elementary - P.E. Building

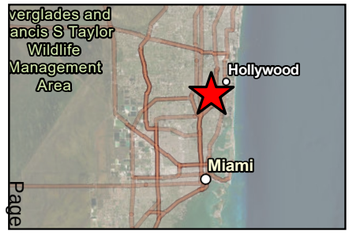
Natural, Cultural, and Historical Assets
89 697749
90 698034
91 698255
92 699824
93 700013
94 700039
95 700506
96 700787
97 840434
98 840436
99 840438
100 840440
101 840441
102 AJ Ryan Park
103 Desoto Lakes
104 Howard Clark Sr Linear Walkway
105 Lake Forest Park
106 Patrick Behan Park
107 Pembroke Park Preserve

TOWN OF PEMBROKE PARK
VULNERABILITY ASSESSMENT

COMPOUND FLOODING
100YR + FUTURE KING TIDAL FLOODING (INT-LOW 2070)

Kimley»Horn

FIGURE
D-4



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Criticality

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102 AJ Ryan Park
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107 Pembroke Park Preserve

Agenda Item Report

Subject:	Stormwater Master Plan - Kimley-Horn and Associates, Inc.
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Stanley Merantus, Public Services Director
Dept/Group:	Public Works
Recommendation for Counsel to consider:	
Background Information:	Presentation of the Stormwater Master Plan
Staff Recommendations:	
Financial Implications:	There is no financial impact.
Alternatives:	

ATTACHMENTS:

Pembroke Park SWMP Update

TOWN OF PEMBROKE PARK

STORMWATER MASTER PLAN



Kimley»Horn

EXECUTIVE SUMMARY

The Town of Pembroke Park (Town) is located in southeast Broward County, Florida and was defined by charter in 1959. In July of 2001, Craig A. Smith & Associates completed a Storm Water Master Plan for the Town to identify corrective actions required to resolve existing flooding conditions in the Town as well as to address any poor water quality conditions. In 2024, the Town had retained Kimley-Horn and Associates, Inc. to prepare this update to the 2001 Stormwater Master Plan to identify additional areas of concern.

Stormwater management and operations within the vicinity of the Town are separated into a three-tiered system, in which the South Florida Water Management District (SFWMD), Broward County, and the Town all play a part in maintaining water quality, limiting discharge, and mitigating flooding.

The purpose of creating this plan is to identify opportunities to protect surface water quality and reduce flooding within the limits of the Town as well as increment the resiliency and prioritize the parts of the project that will have the greatest impacts to the Town.

This Stormwater Master Plan includes the following components:

- An updated review of existing stormwater and drainage data, reports, plans, and regulations available through the Broward County, SFWMD and Town sources.
- An updated drainage atlas of existing drainage structures and their conditions as provided by the Town.
- An updated existing conditions baseline level of service performance in identified priority areas.
- Hydrologic and hydraulic modeling analysis of the existing systems and their capacity to handle the 10-year/3-day, 25-year/3-day and 100-year/3-day storm events.
- Identification and analysis of alternatives for improvements needed to alleviate deficiencies identified in the hydrologic and hydraulic modeling process.
- An optional Capital Improvement Plan to implement improvements in areas identified as priorities.
- Identification and prioritization of stormwater infrastructure improvements that serve as the basis for flood mitigation and increase in resiliency.
- Model of the increase control elevations to emulate future conditions and project resiliency.

Based on a review of the drainage deficiencies identified, input from Town staff, and Town residents, nine (9) project areas were selected as a priority for detailed analysis through hydrologic and hydraulic modeling. Prior to modeling and evaluating the priority projects, minimum performance goals were identified to be as follows:

- During the 10-year return design storm event, flooding in roadway travel lanes should be below the crown of the roadway.
- During the 100-year return storm event, flooding should be below the building finish floor elevations.
- During the 25-year return storm event, discharge to outfalls should be at or below the limits set by the SFWMD.
- During the 25-year return storm event, offsite discharge rates are not to cause adverse impacts to offsite properties, not exceed historic rates, not exceed rates determined by previous permits, nor rates specified by SFWMD's criteria.
- There should be no net encroachment into floodplains at the base flood elevation of the Broward County 100-year storm event.
- Storage upstream of outfalls should allow for the greater value of water quality volume between the first one inch of runoff over the basin area or 2.5 inches times the percent impervious area. Water quality pre-treatment is required for the first one inch of runoff.

Projects to bring each of the priority areas into compliance with the performance goals were identified and all were ranked from worst to best according to current performance against goals to help determine which ones should be constructed sooner.

The ranking and budgets for improvements for each basin were used to develop a 10-year Capital Improvement Plan. The average annual budget for the 10-year CIP is $11,627,923. The CIP includes an annual budget of $200,000+ for operations and maintenance costs such as cleaning catch basins, pipes and exfiltration trench, swale maintenance, street sweeping, participation in federally mandated programs, minor repairs, and administration.

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LIST OF ABBREVIATIONS

BCWPA	Broward County Water Preserve Area
BMP	Best Management Practice
CERP	Comprehensive Everglades Restoration Plan
CFS	Cubic Feet per Second
CIP	Capital Improvement Plan
CRS	Community Rating System
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FFE	Finished Floor Elevation
EFA	Everglades Forever Act
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information System
HDPE	High Density Polyethylene
ICS	Intermediate Control Structure
KHA	Kimley-Horn and Associates, Inc.
LOS	Level of Service
MS4	Municipal Separate Storm Sewer System
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
OFW	Outstanding Florida Waters
OPC	Opinion of Probable Cost
SWMP	Stormwater Master Plan
SFWMD	South Florida Water Management District
USGS	United States Geological Survey
WCA	Water Conservation Area
WPA	Water Preserve Area
WQBEL	Water Quality-Based Effluent Limit

INTRODUCTION

The Town of Pembroke Park (Town) is approximately 1.6 square miles in area and located in southeast Broward County, Florida. Refer to Figure 1 for a map of the Town limits. The Town was incorporated in 1959, and currently has a population of approximately 6,300 residents. Pembroke Park was once an area filled with nurseries, quarries, and mobile home parks. While there are still remnants of the old land uses still present, for example the old rock quarries have been converted to scenic lakes, the Town today consist mostly of commercial use properties to the northeast and residential properties to the southeast and west. Pembroke Park is bordered by Dade County to the south, Hallandale Beach to the east, Miramar to the west, and Hollywood to the north. The position of the Town grants the residents convenient access to I-95 and the Florida Turnpike and has allowed the Town to attract modern warehouses and businesses to its industrial areas.

This growth did not happen all at once. The adoption of a "Comprehensive Land Use Plan" in 1989 by the Town commission has guided the structured growth and development of Pembroke Park. The Town hosts 17 mobile home parks, including four recreational vehicle camping parks, maintaining a stable number of mobile homes annually. New apartments, villas, and townhomes have been developed on the town's western edge. Four passive parks have been recently created at both ends of the town, providing recreational space for all nearby residents.

Looking ahead, Pembroke Park is optimistic about its future, attributed to strategic planning and sound financial management. Town leaders, along with planning consultants and the Planning and Zoning Board, ensure that building standards and the quality of life are maintained, specifically those pertaining to stormwater. The Mayor, Town Commission, Town Manager, and other development professionals are dedicated to making Pembroke Park a vibrant and beautiful community within South Broward. The town aims to continue improving human and social services well into the future.

I. Stormwater Management Background

The Town of Pembroke Park is committed to effective stormwater management and has consistently maintained its stormwater flows to the C-10 canal to prevent overburdening the SFWMD system. This dedication ensures that the regional water management infrastructure operates efficiently, demonstrating the Town's proactive approach to mitigating flooding and its responsible stewardship of local water resources.

Stormwater management and operations within the vicinity of the Town are separated into a three-tiered system. The first tier encompasses SFWMD and its management and operation of the regional drainage canals. The second tier consists of Broward County management and operation. And its third tier is comprised of drainage infrastructure through the roadways managed and operated by the Town of Pembroke Park and private landowners.

The Town of Pembroke Park sits within SFWMD's C-9 East Basin, meaning that its stormwater is conveyed to the C-10 Canal operated by SFWMD, by way of stormwater pumps that lead to an FDOT inlet and stormwater pump station which eventually reaches the C-10 Canal. The Town manages the stormwater system upstream of these canals.

The Town experiences challenges mitigating flooding primarily due to several factors: the absence of canals within the town limits for specific site discharge, the lack of drainage easements or public rights-of-way for adding exfiltration trenches, and the relatively low roadway elevations compared to the seasonal high water table, which hampers the effectiveness of underground storage options such as exfiltration trenches. Despite these challenges, the Town remains a good regional partner, working collaboratively with neighboring towns to address and mitigate flooding issues in the broader area.

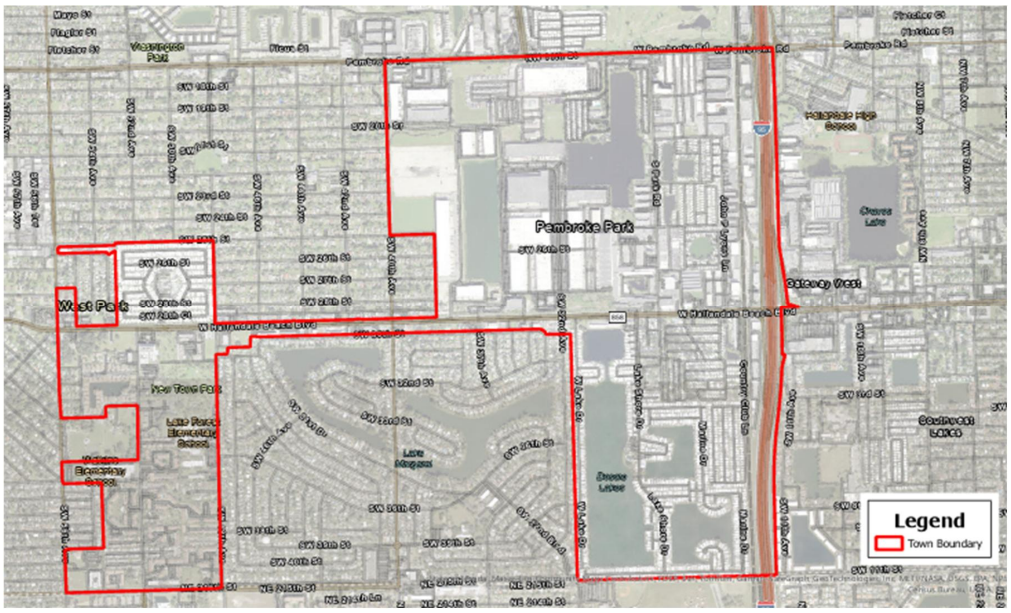


Figure 1. Town Boundary Map

II. Stormwater Master Plan Goals

The purpose of this Stormwater Master Plan is to identify opportunities to protect surface water quality and reduce flooding within the limits of the Town of Pembroke Park, Florida.

The Stormwater Master Plan includes the following components:

- An updated review of existing stormwater and drainage data, reports, plans, and regulations available through SFWMD, BCSWM, and Town sources.
- An updated drainage atlas of existing drainage structures and their conditions.
- An updated existing conditions baseline of the level of service performance in identified priority project areas.
- Hydrologic and hydraulic modeling analysis of the existing systems and their capacity to handle the 10-year/24-hour, 25-year/3-day and 100-year/3-day storm events.
- Identification and analysis of alternatives for improvements needed to alleviate deficiencies identified in the hydrologic and hydraulic modeling process.
- An optional CIP to implement improvements in areas identified as priorities.

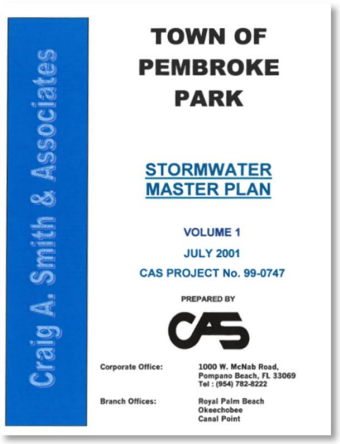
DATA REVIEW

I. Review of Available Data and Existing Conditions

KHA collected available data on the existing stormwater management system within and connected to the Town of Pembroke Park as the first step in developing the SWMP. In-depth research was integral to the development of this report with information collected from local, regional, State, and national sources. Information was sourced from Broward County, the SFWMD, FDEP, United States Geological Survey (USGS), in-person site visits, and the Town of Pembroke Park.

A. Town of Pembroke Park Stormwater Master Plan (2001)

The original SWMP document was developed in July of 2001 by Craig A. Smith & Associates. The purpose was to provide the Town with a comprehensive stormwater master plan and identify corrective actions to address flood conditions while looking at water quality. Utilizing this information, a Comprehensive Storm Water Conveyance Plan was developed, and deficient storm water areas were evaluated for future development into the Town's overall infrastructure. The Town had already undertaken efforts to relieve areas inundated with flooding by retrofitting existing storm water systems and installing storm water pump stations.



Through the application of Federal, State, County, and Local guidelines and the adoption of the Storm Water Ordinance, the Storm Water Master Plan was intended to serve as a systematic approach to decrease storm water runoff, increase water quality, maximize the efficiency of the existing storm water system through Best Management Practices, and reduce and enhance areas within the Town prone to flooding.

The collection of these storm water management utility fees, along with other financial resources, was necessary to offset the costs of storm water capital improvements within the Town. The Town was engaged in ongoing negotiations with the Florida Department of Transportation for necessary discharge rates and local landowners for waterway conveyance rights, which continued to affect the Town's current storm water conditions.

The following is the list of identified projects from the previous Stormwater Master Plan:

- Television Park Development
- SW 48th Avenue (North)
- SW 48th Avenue (South)
- Town Lake Homes Subdivision
- Pembroke Park Preserve
- SW 52nd Avenue (North)
- SW 52nd Avenue (South)
- SW 40th Avenue
- County Line Road
- Meekins Lake Pump Station
- SW 19th Street
- Carolina Street
- Park Road (South)
- SW 31st Avenue (North)
- SW 31st Avenue (South)
- Behan Lake Pump Station

- Lake Shore Manor Pump Station
- Green Acres Pump Station
- SW 10th Street Pump Station
- SW 30th Avenue (North)
- SW 30th Avenue (South)
- SW 30th Avenue (Pump Station Improvements)

Information from the past SWMP was utilized in conjunction with the previously mentioned entities in the effort of completing this update of the Town's SWMP.

B. Broward County Resilience Plan (Ongoing)

Broward County is currently compiling information for a Resilience Plan to be published by the end of 2024. According to the Broward County website, the objective of this Resilience Plan is to provide a risk and economic analysis, an infrastructure improvement and adaptation plan, a platform to track these improvement projects, and a way to collectively mitigate flooding. As of their most recent report (May 2024), Broward County has the final model results, which shows a reduction in flooding by half after the implementation of elevated seawalls, groundwater and surface storage, and conveyance improvements via pumps and culverts. The next steps would be to finish the economic modeling as well as estimated costs for the suggested improvements.

C. Existing Stormwater Regulation

Stormwater management in Florida is subject to State and federal regulations. Two programs regulated by the state and federal governments are the NFIP and the NPDES. The NFIP is managed by FEMA and the Florida Department of Community Affairs (DCA). The NPDES is managed by the EPA and FDEP. KHA collected information on stormwater management requirements from each of these agencies. In addition to federal and State regulations, the Town has adopted their own stormwater codes.

NPDES Permit (2021)

The Town is a co-permittee on the Broward County MS4 Permit through the EPA's NPDES program. The permit is administered by the FDEP. Each year, the co-permittees are required to submit an annual report to FDEP detailing progress on permit mandated activities. These activities range from inspecting storm water treatment facilities to conducting public awareness events to publicize the environmental consequences of illegal dumping.

FEMA and CRS Rating (2018)

The Federal Emergency Management Agency (FEMA) was established in 1979. The purpose of this agency is to work with the federal government to ensure America is prepared to respond to disasters. The Town entered the NFIP Community Rating System (CRS) program in October of 2018 and has a class rating of 9 as of April 2024. The CRS program has a class rating system that ranges from a best rating of 1 and ranges to a lower-class rating of 10. Maintaining or improving the Town's CRS rating requires inter-departmental teamwork. A CRS rating score of 9 offers the Town's residents a 5% discount in the cost of homeowner's flood insurance premiums. The Town can earn credits towards improving their CRS score by increasing public information, developing mapping and regulations, reducing flood damages by various activities, and having a warning and response system in place for flood warnings or threats. Subsequently, CRS activities such as public outreach, flood information website, flood protection assistance, flood data maintenance, and drainage system maintenance should be included in the Town's Storm Water Utility Operation and Maintenance Budget.

County and Town Code of Ordinances (2024)

The Town's Code of Ordinances, published on Town's Municode website, was last updated in 2024. According to the Town's Municode, the Town adopts section 27-196, section 27-197, and section 27-198 of the Code of Ordinances, Broward County. The minimum surface water criteria, licensing requirements, and effluent standard are set by the code of ordinance of Broward County.

Ultimately, the Town of Pembroke Park needs to meet the general stormwater criteria for Broward County, FDEP, as well as SFWMD.

In addition to meeting the County's Code of Ordinance, the Town has also incorporated stormwater provisions for private development in the form of impact fees as outlined in the Town's Municode Article VIII Sections 5-150 to 5-153. Any kind of private development should not impact the Town's stormwater equipment or infrastructure. The Town should review any private development and determine if any of the Town's stormwater infrastructure is impacted. Additional analysis is recommended for any private development that impacts the Town's infrastructure and equipment. In addition to the existing stormwater facilities impact fees, it is recommended that any development that directly and/or indirectly impacts the Town's equipment, such as stormwater pumps, should have impact fees imposed.

D. Environmental Clean Up

During a review of EPA, FDEP, and Broward County records, site with known historically contaminated areas found throughout the Town with such pollutants as gasoline, petroleum, or metals in landfills. There are multiple contaminated sites on the east side of the town, concentrating mainly in the northeast corner. The EPA and FDEP identified and listed one site, EPA ID: FLD980798698, for cleanup which was contaminated with petroleum in the northeast portion of the town. This site currently has a remediation plan developed and underway. A map showing all the listed contaminated sites can be found within Appendix A, Exhibit A-6.

E. Wellfields

The below Wellfield map, Figure 2, was taken from the Wellfield Protection Zones and Contaminated Sites map provided by the Broward County Florida website. Per the provided map, there are no wellfield locations in the Town of Pembroke Park.

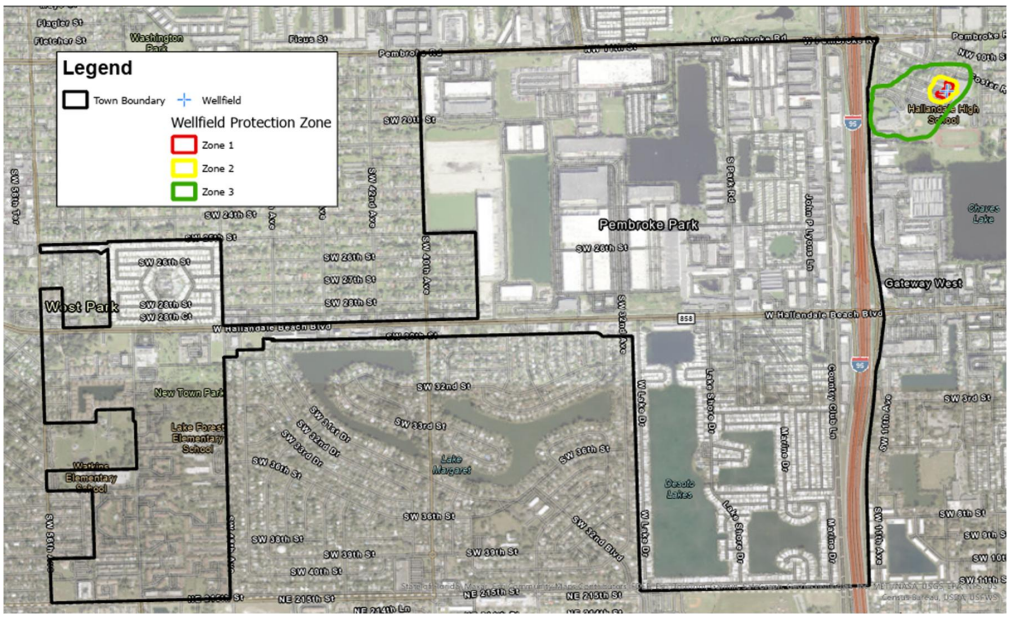


Figure 2. Wellfield Protection Zone Map

F. Soils

The below soil map was taken from the Web Soil Survey site of the United States Department of Agriculture. In Broward County the Dade-Urban land complex contains the highest percent of soil followed by Urban land, 0 to 2 percent slopes, Arents-Urban land complex and Udorthents.

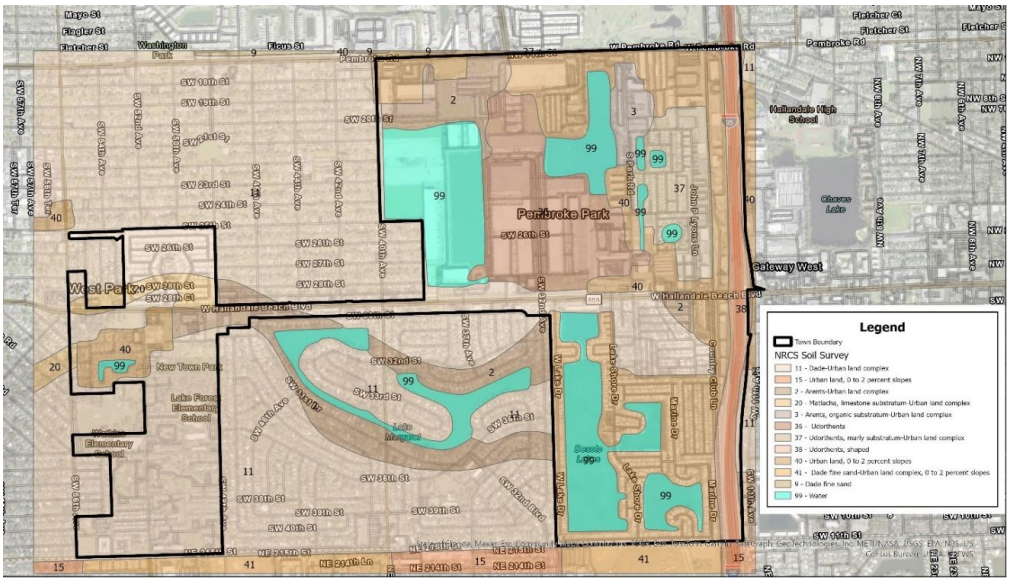


Figure 3. NRCS Soil Survey

G. Land Use Break Down

As per the Town's GIS records, the future land use mostly consists of industrial with the remaining mostly commercial and residential use. See Table 4 below.

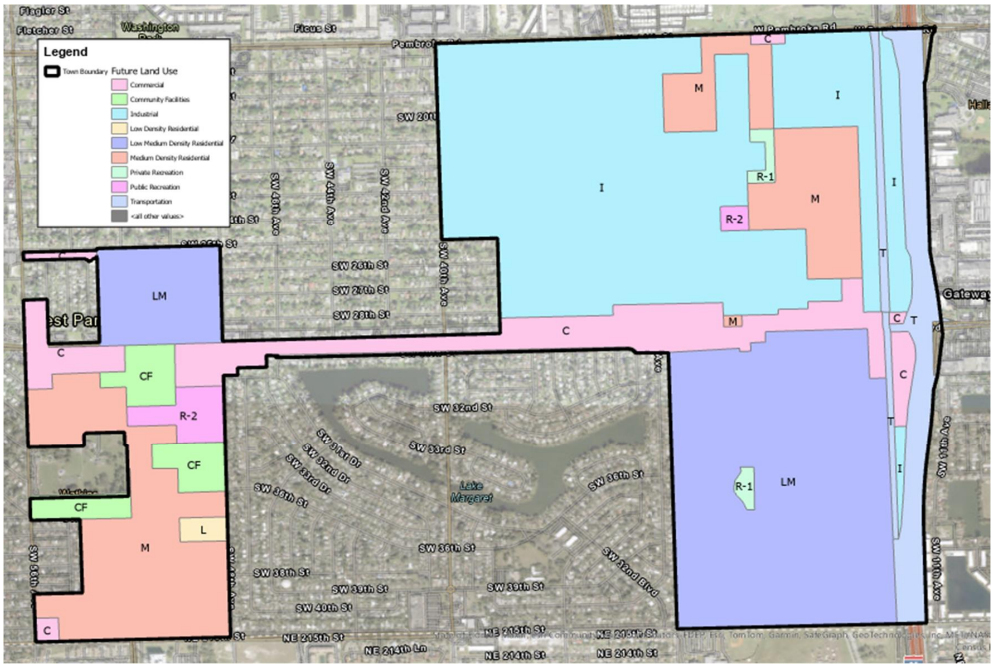


Figure 4. Future Land Use Map

H. Groundwater

Per the Broward County's Conditional Water Table maps, for the Town of Pembroke Park's seasonal high water table (SHWT) is located between the 0.5' NAVD and 1.5' NAVD equipotential lines, highlighted in yellow. Therefore, KHA utilized for the purposes of modelling a 1.0' NAVD SHWT.

II. Existing Stormwater Management System Data Review

A. Town Geographic Information System (GIS) Data

The Town of Pembroke Park maintains its own database of GIS maps and exhibits. Among these maps are Flood Zone Maps (See Appendix A), a Land Use Map, a Stormwater System Map, a Town Atlas, a Map of Water Bodies and Wetland Maps. Some of these maps require ongoing updates and revisions to show accurate information.

Types of Systems

Based on a review of the data included in the GIS obtained from Broward County Data Hub, SFWMD, and Town of Pembroke Park, KHA categorized the existing sub-basin drainage systems into types. The drainage systems were classified into the following four categories:

- Outfall systems – systems with no exfiltration trench. Pipe connections are made to lakes within the Town.
- Closed systems – systems that do not have pipe connections to a lake system and rely solely on exfiltration trenches and/or swales for drainage.
- Combination systems – systems that have both exfiltration trench and outfall pipe connections to the lakes within the Town.
- Undeveloped or unknown – systems located in areas where GIS information is not available or areas that are undeveloped.

Based on the area served, the majority of the Town of Pembroke Park currently relies on either closed systems or lake outfall systems for their drainage needs.

B. As-Built Plans and Completed Projects

The Town, FDOT, SFWMD, and BCSWM provided as-built plans and information of previously implemented stormwater projects. These completed projects were reviewed and used to identify model revisions.

C. Existing Permits

KHA has reviewed and compiled all permits and plans submitted to SFWMD, BCSWM, as well as the Town to accurately construct our model of the entire Town in stormwater flood modeling software (ICPR4). Although not an exhaustive list, the table below shows Town projects that have either already been constructed or are permitted to be built in the near future that interact directly with proposed improvements in this update of the Town's SWMP.

Table 1. Town Drainage Improvement Projects

SFWMD Environmental Resource Permit	Project Name	Status
SFWMD 06-03080-P	Town of Pembroke Park SW 25 Street Stormwater Improvements Project	Construction to begin 2024
In Process	John P. Lyons Lane Drainage Improvements	Construction to begin 2025
Self-Certification	SW 31st Avenue (John P. Lyons Lane) Stormwater Improvements (Phase I)	Completed
SFWMD 06-03080-P	Stormwater Pump Station - Park Road & SW 24th Street	Completed
SFWMD 06-01979-S	SW 52nd Avenue (North)	Completed

Additionally, Exhibit A-4 in Appendix A depicts Environmental Resource Permits (ERP) that have been recorded with SFWMD used to develop the modeling for this SWMP.

D. Townwide Pump System

Existing Stormwater Pump Configuration

Currently the Town has a system of stormwater pumping stations throughout the northeastern portion of the Town. These pumps facilitate the conveyance of stormwater from the existing gravity network to two existing discharge points. Pump 1 currently collects water from Behan Lake and discharges to FDOT's system along Pembroke Road which then discharges to the Orangebrook Golf Course and Country Club through a control structure to the north. Pump 2 and Pump 3 pump stormwater from the adjacent lakes to an FDOT swale alongside I-95 which ultimately leads to an FDOT pump just north of West Hallandale Beach Boulevard. Pump 4 and Pump 5 currently convey the water from the connected gravity system as well as Behan Lake to Meekins Lake to the west.

According to permit documents and information provided by Town staff, each pump station has the following restrictions:

- Pump 1-Permit documents show that Pump 1 conveys stormwater at a maximum flow of 7 CFS towards the FDOT Pembroke Road conveyance system. For the purposes of modelling and in accordance with permit documents, the pumps were set to turn on and off via float switches upstream set to activate at 1.0 feet NAVD and shut off at 0.5 feet NAVD with an emergency off set at -0.5 NAVD.
- Pump 2-As per the previous stormwater master plan, Pump 2 pumps at a rate of 40 CFS, however, correspondence with the Town has clarified that the pump is capable of pumping at a rate of 80 CFS and is manually activated during emergency storm events. The Town does not operate Pump 2 when Pump 3 is running.
- Pump 3- Located within a manufactured homes development and pumps stormwater at a rate of 3 CFS towards the FDOT swale along I-95. For the purposes of modelling and in accordance with permit documents, the pumps were set to turn on and off via float switches upstream set to activate at 1.0 feet NAVD and shut off at 0.5 feet NAVD with an emergency off set at -0.5 NAVD. The Town does not run Pump 3 while Pump 2 is running to avoid overloading the FDOT system.
- Pump 4- Set to pump at 5.6 CFS and limited to running for a maximum of 27 hours. For the purposes of modelling and in accordance with permit documents, the pumps were set to turn on and off via float switches upstream set to activate at 1.0 feet NAVD and shut off at 0.5 feet NAVD.
- Pump 5- Draws runoff from Behan Lake and leads to Meekins Lake to the west at a rate of 3.0 CFS. For the purposes of modelling and in accordance with permit documents, the pumps were set to turn on and off via float switches upstream set to activate at 1.0 feet NAVD and shut off at 0.5 feet NAVD.

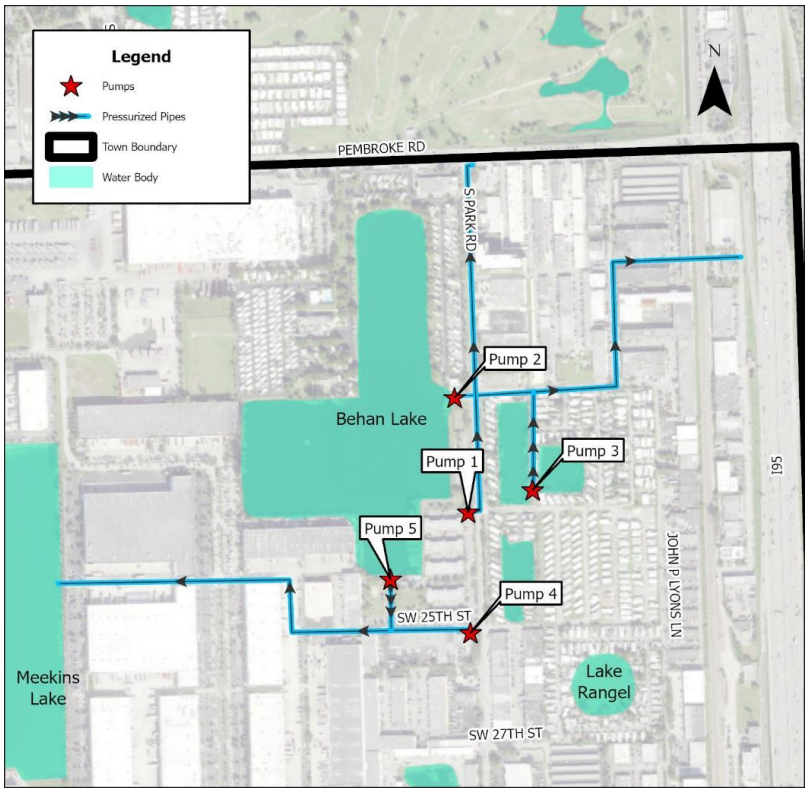


Figure 5. Existing Stormwater Pump Location Map

Proposed Stormwater Pump Configuration

The Town currently has proposed plans that include the addition of two new stormwater pumps to their existing system. The figure below, Figure 7, shows the locations at which these new pumps are being placed and the direction in which they are conveying stormwater. The pump station at John P. Lyons Lane will move the stormwater from the main trunkline down John P. Lyons Lane to Behan Lake by force main under Carolina Street; correspondence with the Town indicated that construction should begin in 2025. The proposed pump station located along 25th Street will move the water stored in the exfiltration trench to the southern portion of Behan Lake; correspondence with the Town indicated that construction should begin by the end of 2024.

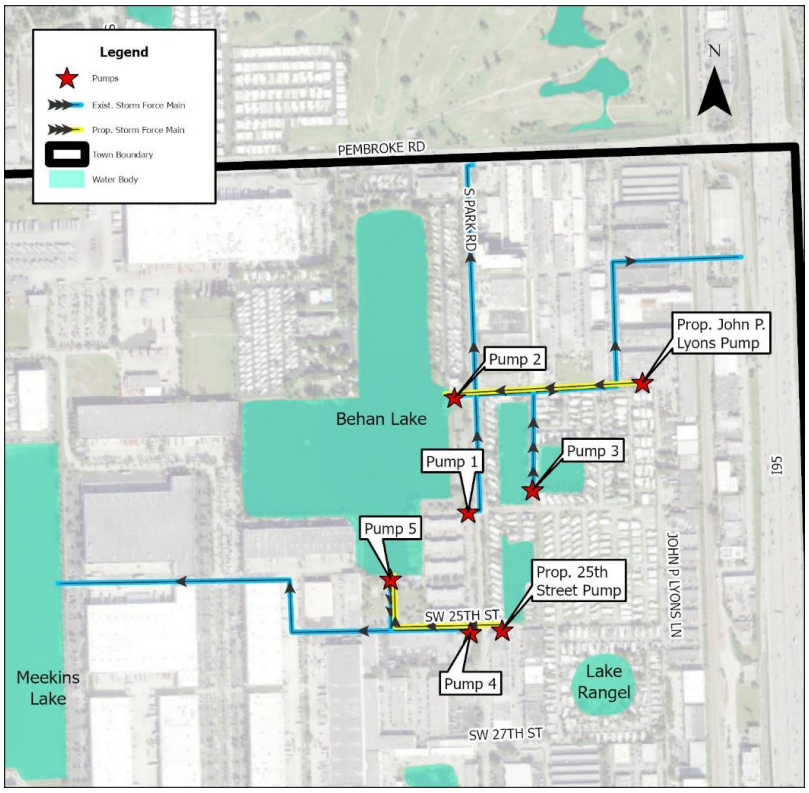


Figure 6. Proposed Stormwater Pump Location Map

E. Summary of Completed Stormwater Projects

KHA collected and reviewed available data on the completed stormwater projects within the Town of Pembroke Park in order to prepare this Stormwater Master Plan.

- SW 31st Avenue (John P. Lyons Lane) Stormwater Improvements (Phase I)
- Stormwater Pump Station - Park Road & SW 24th Street
- SW 52nd Avenue (North)

F. Identification of Drainage Deficiency Areas

The Town has provided KHA complaints from the residents and observed flooding by Town officials. In conjunction with the complaints received, KHA visually observed flooding on numerous occasions after storm events.

Visual Assessment of Existing Conditions

KHA visually assessed roadway flooding conditions during and after rainfall events lasting one hour or more. KHA also evaluated the condition of existing drainage structures within the Town.

See Figure 8 for a visual of the spatial distribution of problem areas and field data collection locations.

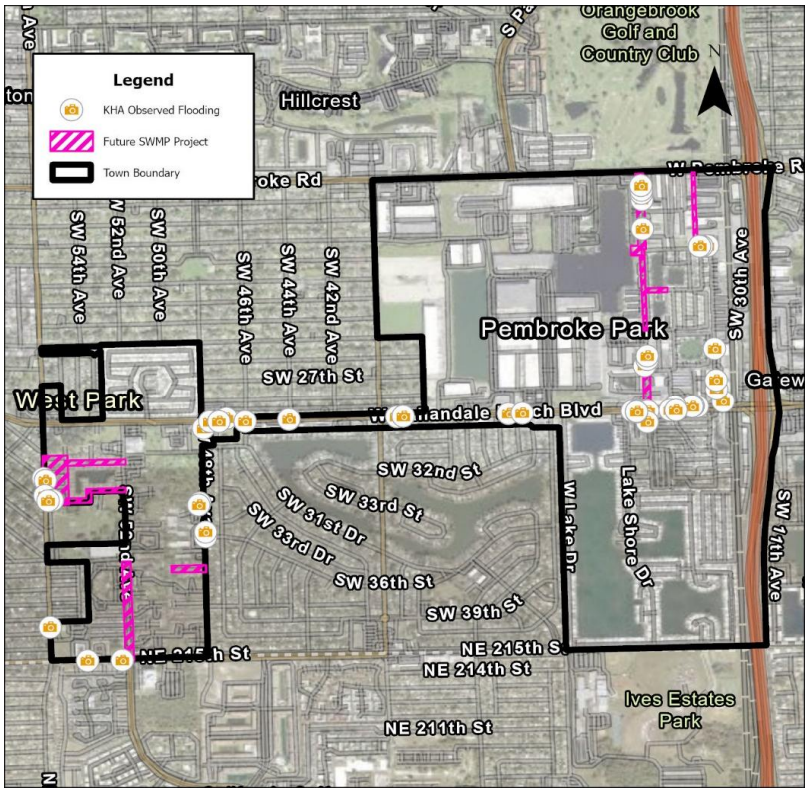
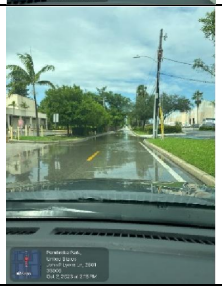


Figure 7. Field Visit Locations

KHA performed field visits to the Town shortly after rain events lasting longer than one hour.

Table 2 shows a few of the many photographs taken during KHA observations.

Table 2. KHA Observed Flooding

		Flooding at the intersection of Carolina Street and SW 31st Avenue
		Flooding along the north end of South Park Road.
		Flooding along the north end of South Park Road.
		John P. Lyons Lane, another example of the flooding observed

DRAINAGE ANALYSIS

A. Methodology

The approach for this SWMP analysis was to determine the water quality and quantity performance goals for the Town, based on requirements as well as best management practices, for public right-of-way spaces. The Town is not responsible for drainage infrastructure on private property, however private property infrastructure is required to meet permitting requirements specified by SFWMD, Broward County, and the Town when obtaining licensing and permitting. Once performance goals were determined KHA developed a townwide flooding model that depicts the existing conditions and then compared and verified the findings with resident complaints, Town observations, and KHA observation. The existing model was then calibrated to closer represent the observed conditions so that the model reflected true results to the extent possible. Rainfall events determined by performance goals were then built into the model to see the effects and determine deficiencies throughout the Town. Model results for the selected rainfall events were reported in flooding elevations and then compared to the natural grade elevations to compare possible flooding above natural grade.

B. Water Quality Treatment Performance Goals

Prior to modeling and evaluating the priority drainage project areas, performance goals were identified based on FDEP and SFWMD requirements. These performance goals represent the minimum water quality treatment standards for future development.

Volumetric Requirements

The Town's Code of Ordinances, as discussed in Chapter 13.5, Article V, Section 13.5-54 states that all proposed development should meet a criterion of providing volumetric treatment for the first 1 inch of runoff. Additionally, SFWMD advises, in their Environmental Resource Permit Applicant's Handbook Volume II Section 4.2.1, that volumetric water quality treatment provided for a development be the greater of either the first 1 inch of rainfall across the site or 2.5" times the total percent impervious. For pre-treatment requirements, Section 4.2.2 of the SFWMD ERP Applicant's Handbook Volume II states that commercial or industrial projects must include at least one-half inch of dry detention or retention pretreatment in their required retention/detention systems, unless they can guarantee that hazardous materials will not enter the surface water management system. Or projects with more than 40% impervious area that discharge directly into specified receiving waters must provide at least one-half inch of dry detention or retention pretreatment as part of the required retention/detention.

For projects discharging to an OFW or impaired water, additional water quality treatment may be needed. The Town does not discharge to an OFW, however it is within the Snake Creek Canal (East) basin which is listed by FDEP as an impaired waterbody. Additionally, water quality measures may be required for a net improvement as per Appendix E of SFWMD's ERP Applicant's Handbook Volume II.

Nutrient Reduction Requirements

The Town does not set its own limits but has partnered with the SFWMD and the County to implement non-structural and structural BMPs to limit nutrient loadings from the source. Ongoing State research of stormwater runoff pollutants and efforts to enforce consistency between the water management districts will impact future requirements, including a move towards nutrient loading analyses rather than volumetric requirements. HB-7053 in March of 2024 was Laid on Table to become law in the House and there is a companion bill that mirrors the proposed legislation by the Senate called SB-7040. And are expected to take effect in the Summer of 2024.

These Bills will require the following alternate levels of sufficient treatment:

- An 80 percent reduction of the post-development average annual loading of total phosphorus (TP) and a 45 percent reduction of the post-development average annual loading of total nitrogen (TN) from the project area or post-development levels lower than pre-development levels, whichever is greater.
- For stormwater systems located within a sub watershed containing an Outstanding Florida Water (OFW) and located upstream of that OFW, a stricter requirement of a 90 percent reduction of the post-

development average annual loading of TP and a 80 percent reduction of the post-development average annual loading of TN from the project area or post-development levels lower than pre-development levels, whichever is greater.

- For stormwater treatment systems located within a sub watershed containing an impaired water body and located upstream of that impaired water, a stricter requirement of a 80 percent reduction of the post-development average annual loading of TP and TN if not within and OFW, a 95 percent reduction of the post-development average annual loading of TP and TN if in an OFW, a no net improvement for pollutants not meeting standards, or post-development levels lower than pre-development levels, whichever is greater.

In the efforts of planning ahead, this SWMP addresses water quality treatment by recommending stormwater conveyance improvements that result in a net reduction of nutrient loading as compared to existing conditions as well volumetric requirements currently set by SFWMD. Nevertheless, KHA recommends that water quality calculations be reevaluated when recommended improvements in this SWMP move into the design phase, and eventually construction/operation.

C. Water Quantity Performance Goals

The level of service adapted by the Town is captured in its Code of Ordinances, discussed in Chapter 13.5, Article V, Section 13.5-54, which states that all proposed development should meet a criterion of 1 inch in a 25 year/24-hour storm event. KHA recommends that the town adopts the standards set forth by SFWMD which has been the minimum standard adopted by BCSWM. The following requirements were set as the goals for the project improvements in this SWMP based on the applicable requirements as well as best management practices for stormwater infrastructure:

- During the 10-year/24-hour storm event, flooding in roadway travel lanes should be below the crown of the roadway. This standard is the same as the current Broward County standard for arterial roadways.
- During the 25-year/3-day storm event, offsite discharge rates are not to cause adverse impacts to offsite properties, not to exceed historic rates, not to exceed rates determined by previous permits, nor rates specified by SFWMD's criteria.
- During the 100-year/3-day storm event, flooding should be below the building finish floor elevations. This standard is the same as the current Broward County standard.
- No net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100-year event, which will adversely affect the existing rights of others, will be allowed.

D. Sub-Basins

For the purposes of our modelling and analysis, the Town was delineated into sub-basins by utilizing the project boundaries of existing SFWMD permits and the corresponding data within these permits. The figure below demonstrates the sub-basin boundaries utilized for modelling purposes.

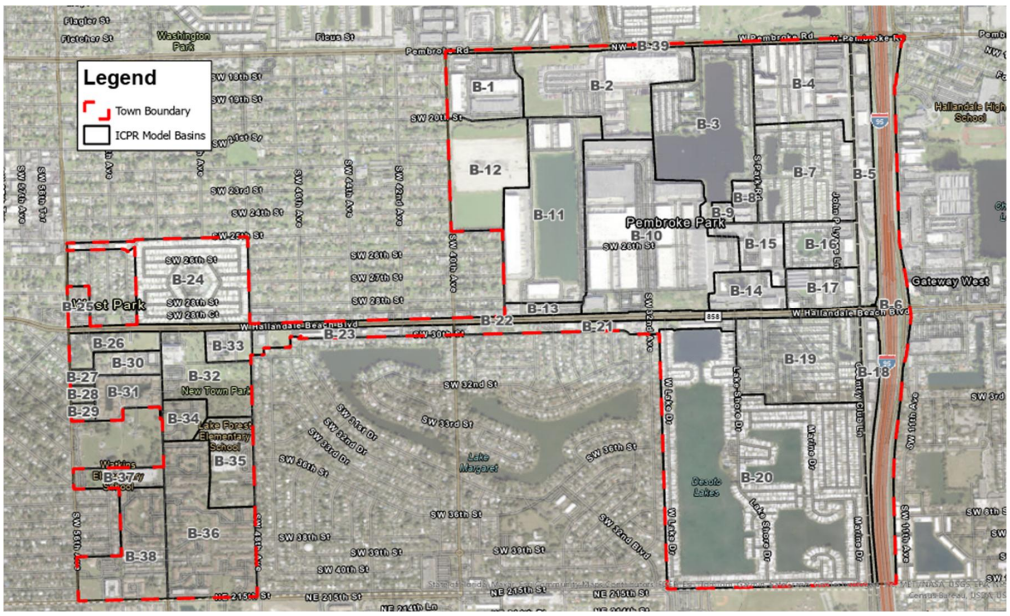


Figure 8. Sub-Basin Map

E. Model Assumptions

Various assumptions were made for developing the computer model as well as for the drainage calculations as follows:

- All elevations shown are in reference to the National American Vertical Datum of 1988 (NAVD).
- It was assumed that in residential areas, all private property contributed stormwater runoff to the right-of-way.
- Hydraulic conductivities for the purpose of exfiltration trench calculations were taken from SFWMD's permit portal for projects near or adjacent to the proposed projects modelled in this SWMP.
- Exfiltration trenches were modelled to be 6 feet wide and set 0.5 feet to 1 foot below the seasonal high groundwater table.
- It was assumed that the seasonal high groundwater table throughout all sub-basins to be at an elevation of 1.0 feet-NAVD as per Broward County's Future Conditional Groundwater.
- Elevation data was taken from LiDAR provided from Broward County Data Hub and the accuracy confirmed with permitted plans that include surveys.
- Connections among project sub-basins were confirmed by cross referencing the existing structure/pipe GIS shapefiles developed by the Town and permitted plans found on BCSWM and SFWMD permit portal.

The model was broken up into three scenarios: the first scenario is the existing conditions as the town functions at the time of this master plan update. The second scenario is the proposed condition which includes the proposed improvements of John P. Lyons and SW 25th St since the Town is in the process of design and permitting at the time of our analysis. The third and final scenario is the future condition which included the Town's proposed improvements as well as the future project improvements proposed in this SWMP.

Data Collection Findings

The Town and KHA observed flooding, KHA developed flooding level maps created through modeling to better analyze the Town's deficiencies and areas that need attention. The figure below, Figure 10, is a flooding level map showing the max storm stages relative to the natural grade elevations for a 10-year/24-hour storm of the existing

conditions model. Areas with blue will experience flooding, with deeper flooding represented by darker blues. Note that lake water elevations are lower than natural grade and therefore will show higher water levels during storm events.

Upon review and analysis of the data collected for the purpose of the update to the SWMP, KHA has found that due to lack of connectivity among existing stormwater infrastructure, poorly placed storm structures, poorly graded asphalt, and/or lack of drainage infrastructure in general is causing areas across the Town to flood.

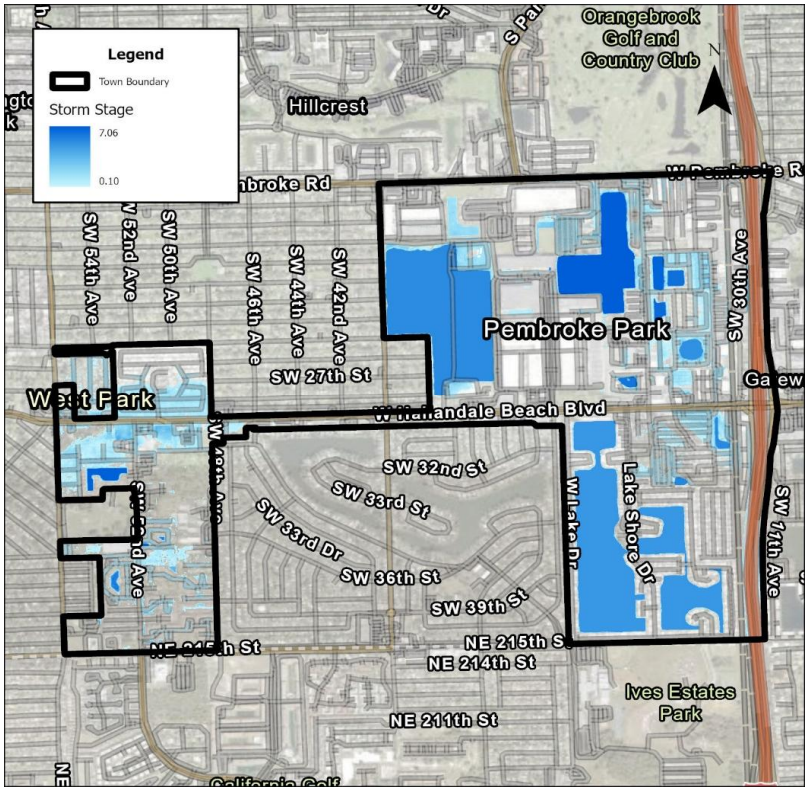


Figure 9. 10-Year/24-Hour Flooding Heat Map

III. Project Area Analysis

The hydrologic and hydraulic modeling utilized to evaluate whether each priority project area meets the performance goals is based on the data collected and described in previous sections of this report. The following sections of this report describe the hydrologic and hydraulic modeling results, potential storm drainage deficiencies, and recommended drainage infrastructure improvements within the tertiary drainage system for each of the priority project areas.

A separate 1D hydrologic and hydraulic model was prepared using ICPR v. 4.07 modeling software for each location with hydrologic parameters and inputs based on the Townwide existing model prepared by KHA. Each project area was analyzed using three (3) storm events associated with the Town's level of service for it's stormwater systems. KHA researched typical rainfall depths for each storm event using NOAA Atlas 14, which estimates an area's rainfall depth per storm event based on historical data collected by NOAA (see Table 3).

Table 3. Rainfall Depths per Storm Event

Storm Event	Rainfall Depth (inches)
10-year/24-hour	8.85
25-year/72-hour	13.3
100-year/72-hour	18

- The Curve Number Method was used to estimate rainfall losses and runoff.

Performance analysis of each proposed project area was completed through the following steps:

- Gathering data on each basin including percent impervious, total contributing area, water table elevation, control water elevation, soil type, the roadway low centerline elevation and the assumed building elevation (FFE elevations taken from LiDAR).
- Level of Service
  - Modeling the 10-year storm event to determine the existing peak stage as compared to the crown of road elevation.
  - Modeling the 100-year/3-day storm event to determine the existing peak stage as compared to building finished floor elevations (FFE).[1]
  - Modeling three scenarios, per project. The existing conditions, then to account for projects that are already permitted and nearly ready for construction, and future improvements outlined in this SWMP.
- Water Quantity
  - Modeling the 25-year/3-day storm event to determine the existing peak discharge and stages to compare and ensure the proposed projects improve upon historic rates.
- Water Quality
  - Calculating the required water quality volume based on the greater value of the first 1 inch of runoff over the basin area or 2.5 inches times the percent impervious area. The calculated water quality volume was then compared to the existing detention volume (e.g. existing swale detention volume) to determine whether the drainage system is meeting the requirement.
  - Calculate nutrient loading removal.

Nutrient loading analysis was completed using BMP Trains, simultaneous with the modeling effort, to ensure that the proposed project would reduce nutrient loading to the lake outfalls as compared to existing conditions.

Recommended improvements for the priority areas consist of one or more of the following:

- Constructing additional catch basins, or other drainage system connectors for low points without positive drainage. This could be applicable for areas that note discontinuous flows adjacent and/or between swales.
- Increased maintenance within the sub-basin. This is a common recommendation for all areas, but especially those where grates were observed to be covered with leaves, catch basins were full of debris, swales were overgrown, or damage to pipes or exfiltration trench was observed.
- Increasing swale capacity within the right-of-way where possible. Swales are low pervious areas located outside of the roadway travel lanes but still within the right-of-way. Swales store runoff from the roadway and allow it to percolate into the soil over time. Swale storage capacity can be expanded by increasing the slope of the sides of the swale or making the swale.
- Adding stormwater system trunklines and additional exfiltration trench to collect runoff from existing and additional catch basins as well as driveway culverts to better connect the existing systems.
- Re-grading of roadways to promote flow to existing drainage structures. This would apply to areas where the roadway has deteriorated or where “birdbaths” (minor low elevations) have occurred. The roadway

[1] The calculations in Appendix B also include a column comparing peak stages during the 100-year, 3-day storm event in existing conditions with peak stages in proposed conditions, rather than just comparing to FFE.

would be “leveled out” to eliminate these areas because they are susceptible to ponding. In addition, elevating roadways to ensure that the crown of road elevation complies with the level of service without affecting flood stages in adjacent buildings.

A. Infinity Azure

Project Location

The Infinity Azure project sub-basin falls along SW 32nd Street as well as SW 34th Street, just south of West Hallandale Beach Boulevard and north of McTyre Park. The project location is outlined in the figure below, Figure 11.

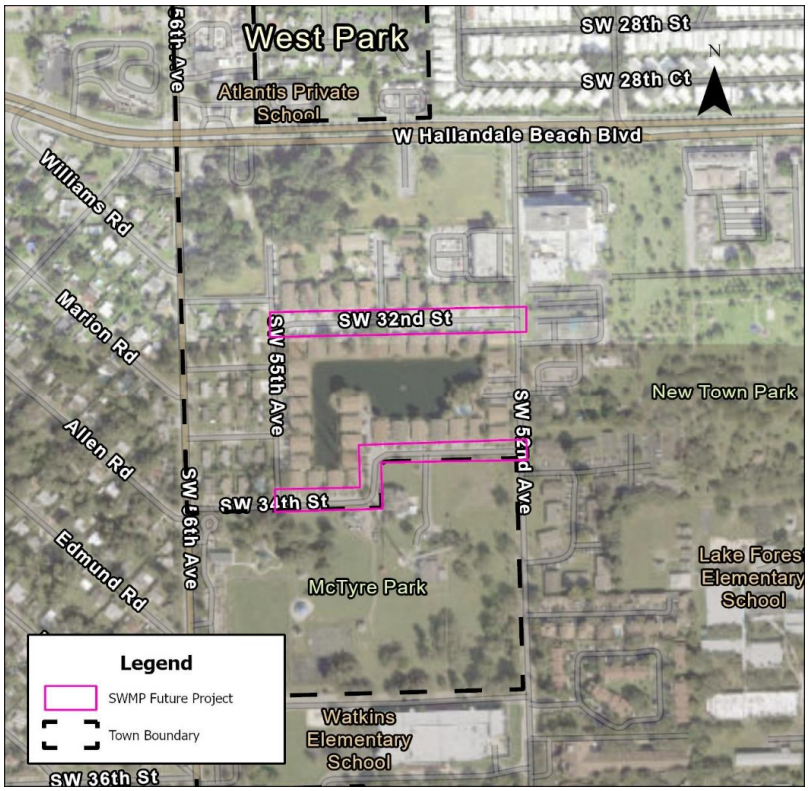


Figure 10. Infinity Azure Project Location

Existing and Future Conditions

This sub-basin consists of approximately 4.57 acres of existing multi-family development with approximately 2,100 LF of roadway. The current stormwater system consists of a few drainage inlets and underground pipes used to convey water that ultimately outfalls to a lake that is on site. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models, KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the basin versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 4. Infinity Azure Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
Infinity Azure	No	No	No	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure is inadequately interconnected and does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends adding exfiltration trench and catch basins throughout the project area. The overall flow of water to the existing outfall is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently disrupts uninterrupted flow to the outfall resulting in ponding or flooding. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in a significant reduction in the pollutant load contribution from this project area to the lake for two major pollutants.

Table 5. Infinity Azure Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	51.05	95%	48.4
Total Phosphorous	11.443	95%	10.848

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 6. Infinity Azure Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization	1	LS	$80,900	$81,000
2	Stormwater Pollution Prevention Plan	1	LS	$8,090	$9,000
3	Inlet Apron	18	EA	$500	$9,000
4	Drainage Pipe (36" HDPE) w/ Trench Restoration	360	LF	$200	$72,000
5	Exfiltration Trench w/ Trench Restoration	1,965	LF	$230	$452,000
6	Pollution Retardant Baffle	23	EA	$600	$14,000
7	Catch Basin	18	EA	$7,000	$126,000
8	Manhole	15	EA	$8,000	$120,000
9	Utility Sleeves and Adjustments	1	LS	$15,900	$16,000
10	Professional Services	1	LS	$121,350	$122,000
11	Contingency	1	LS	$202,250	$203,000
				TOTAL	$1,224,000

B. Park Road – North Part I

Project Location

The Park Road – North Part I project sub-basin falls along S Park Road, just south of West Pembroke Road and east of Lakeside Park Estates residential development. The project location is outlined in the figure below, Figure 12.

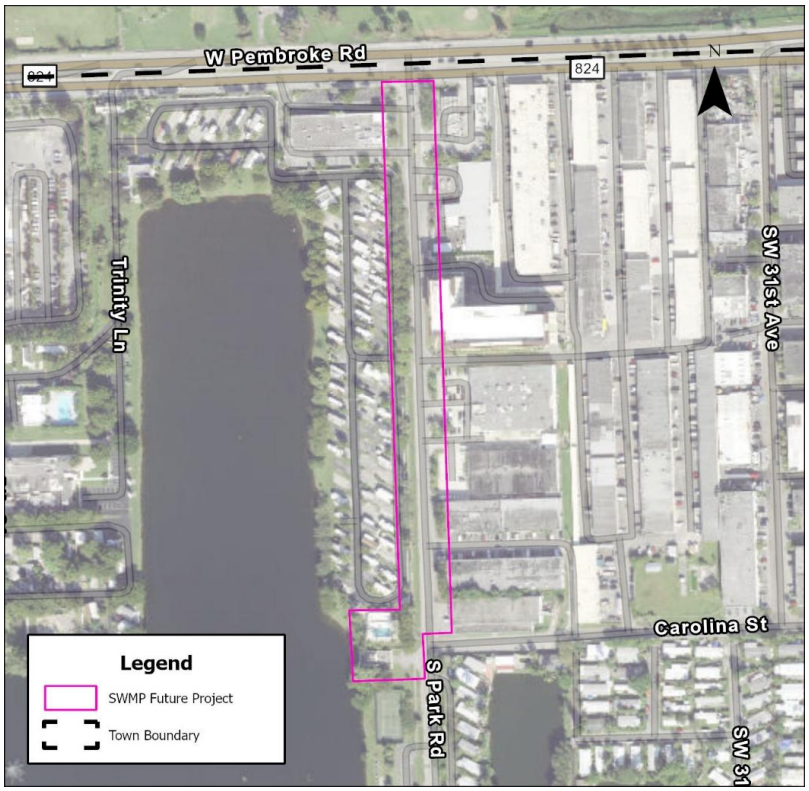


Figure 11. Park Road – North Part I - Project Location

Existing and Future Conditions

This sub-basin consists of approximately 4.92 acres of existing industrial development adjacent to manufactured home developments with approximately 1,420 LF of roadway within the project limits. The current stormwater system consists of sparsely scattered drainage inlets and some swale. The existing storm trunkline that exists under S Park Road, originally used to convey stormwater, has a stormwater force main coming from the stormwater pump station just southeast of Behan Lake. The stormwater force main travels through the existing storm gravity main and ultimately outfalls to an FDOT inlet that is on the north end of the project limits along Pembroke Road. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the basin versus performance goals. "Yes" means the given

drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 7. Park Road – North Part I - Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
Park Road – North Part I	No	No	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure is inadequately interconnected and does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: It is KHA's recommendation that most of the existing swales be regraded and that new swales be constructed in flatter areas more susceptible to flooding. The cumulative length of the proposed swales is approximately 650 LF. The swales are to be designed with a minimum width of 4 feet and a minimum depth of 0.5 feet.

KHA recommends the addition of exfiltration trench as well as addition of catch basins throughout the project area. The overall flow of water to the existing outfall is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently disrupts uninterrupted flow to the outfall at Behan Lake resulting in ponding or flooding. The proposed improvements will connect the stormwater system to Behan Lake as well at the stormwater pump station southeast of Behan Lake. This project was designed to connect and compliment the plans completed by Keith Engineers for the north portion of John P. Lyons Lane along Carolina Street set to be constructed in 2025. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area to the lake for two major pollutants.

Table 8. Park Road – North Part I - Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	28.43	95%	26.95
Total Phosphorous	6.16	95%	5.839

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 9. Park Road – North Part I - Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization	1	LS	$67,900	$68,000
2	Stormwater Pollution Prevention Plan	1	LS	$6,790	$7,000
3	Curbing Restoration	550	LF	$40	$22,000
4	Driveway/Sidewalk Restoration	320	SY	$50	$16,000
5	Inlet Apron	8	EA.	$500	$4,000
6	Drainage Pipe (36" HDPE) w/ Trench Restoration	635	LF	$200	$127,000
7	Exfiltration Trench w/ Trench Restoration	1,350	LF	$230	$311,000
8	Pollution Retardant Baffle	10	EA	$600	$6,000
9	Catch Basin	6	EA	$7,000	$42,000
10	Curb Inlet Catch Basin	2	EA	$10,000	$20,000
11	Manhole	10	EA	$8,000	$80,000
12	Swale Restoration	150	SY	$3	$1,000
13	Core Drill Existing Structure	9	EA	$1,000	$9,000
14	Utility Sleeves and Adjustments (15%)	1	LS	$40,350	$41,000
15	Professional Services	1	LS	$101,850	$102,000
16	Contingency	1	LS	$169,750	$170,000
				TOTAL	$1,026,000

C. Park Road – North Part II

Project Location

The Park Road – North Part II project sub-basin falls along S Park Road, just south of Carolina Street and east of Lakeside Park Estates residential development. The project location is outlined in the figure below, Figure 13.

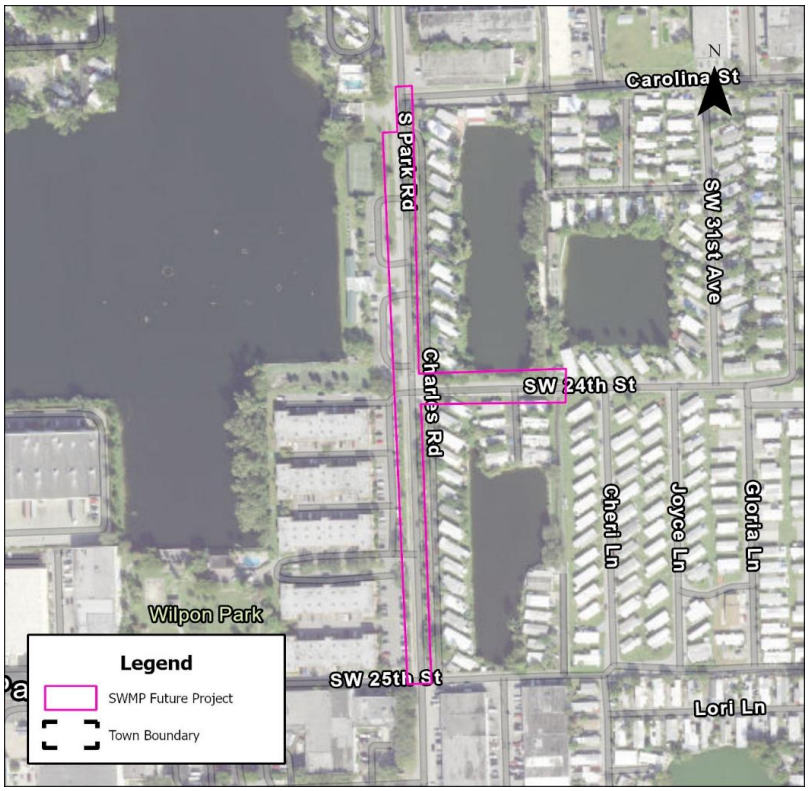


Figure 12. Park Road – North Part II Project Location

Existing and Future Conditions

This sub-basin consists of approximately 3 acres of existing industrial development adjacent to manufactured home developments with approximately 1,900 LF of roadway. The current stormwater system consists of sparsely scattered drainage inlets. As mentioned in the previous section, the existing storm trunkline that exists under Park Road has a stormwater force main coming from the stormwater pump station just southeast of Behan Lake, west of the intersection of Park Road and SW 24th Street. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the basin versus performance goals. "Yes" means the given

drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 10. Park Road – North Part II Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
Park Road – North Part II	No	No	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure is inadequately interconnected and does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends the addition of exfiltration trench as well as addition of catch basins throughout the project area. The overall flow of water to the existing outfall is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently disrupts uninterrupted flow to the outfall at Behan Lake resulting in ponding or flooding. The proposed improvements will connect the stormwater system to Behan Lake as well at the stormwater pump station southeast of Behan Lake. The project was designed to connect and compliment the SW 25th Street permitted plans prepared by Craig A. Smith Engineers anticipated to start construction by the end of 2024. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area to the lake for two major pollutants.

Table 11. Park Road – North Part II Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction (kg/yr)	Mass Reduction (kg/yr)
Total Nitrogen	23.76	95%	22.53
Total Phosphorous	3.9	95%	3.698

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 12. Park Road – North Part II Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$67,200	$68,000
2	Stormwater Pollution Prevention	1	LS	$6,720	$7,000
3	Driveway/Sidewalk Restoration	30	SY	$50	$2,000
4	Inlet Apron	13	EA	$500	$7,000
5	Drainage Pipe (36" HDPE) w/ Trench Restoration	600	LF	$200	$120,000
6	Exfiltration Trench w/ Trench Restoration	1,550	LF	$230	$357,000
7	Pollution Retardant Baffle	15	EA	$600	$9,000
8	Catch Basin	10	EA	$7,000	$70,000
9	Manhole	8	EA	$8,000	$64,000
10	Core Drill Existing Structure	4	EA	$1,000	$4,000
11	Utility Sleeves and Adjustments (15%)	1	LS	$38,100	$39,000
12	Professional Services	1	LS	$100,800	$101,000
13	Contingency	1	LS	$168,000	$168,000
				TOTAL	$1,016,000

D. Park Road – South

Project Location

The Park Road – South project sub-basin falls along S Park Road, just north of W Hallandale Beach Boulevard. The project location is outlined in the figure below, Figure 14.

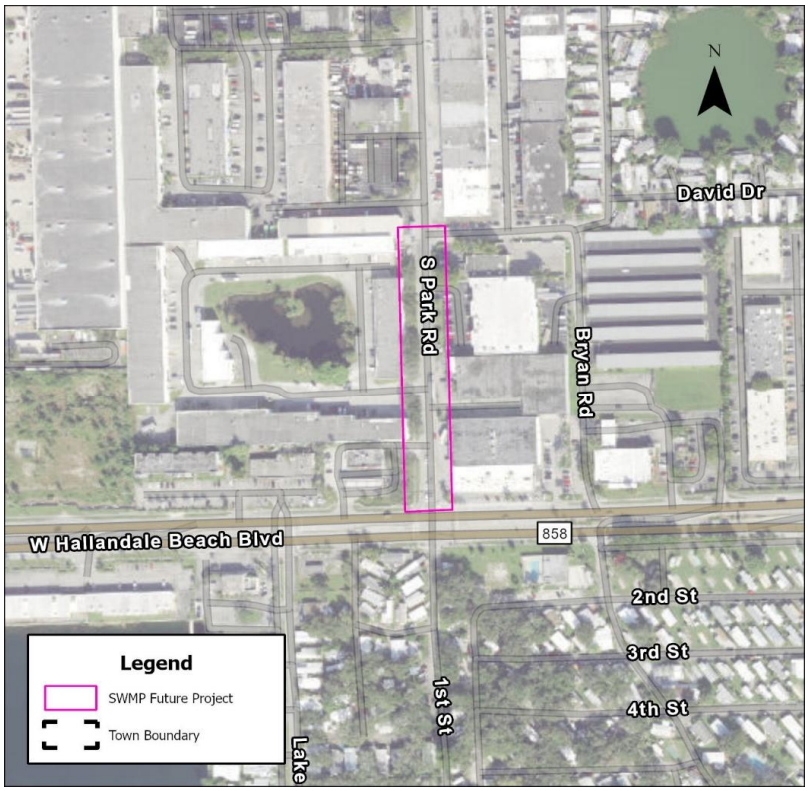


Figure 13. Park Road – South Project Location

Existing and Future Conditions

This sub-basin consists of approximately 2 acres of existing industrial development adjacent to manufactured home developments with approximately 700 LF of roadway. The current stormwater system consists of drainage inlets. Some of the inlets along this portion of road fall behind curbing which inhibits the flows to the structures causing further flooding. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 13. Park Road – South Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
Park Road - South	No	Yes	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends the addition of exfiltration trench as well as addition of catch basins throughout the project area. The overall flow of water to the existing outfall is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently disrupts uninterrupted flow to the outfall at Behan Lake resulting in ponding or flooding. The proposed improvements will connect the stormwater system to Behan Lake as well at the stormwater pump station southeast of Behan Lake. This project was designed to begin on the south end of the SW 25th Street permitted plans completed by Craig A. Smith Engineers which has anticipated to start construction by the end of 2024. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area for two major pollutants.

Table 14. Park Road – South Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction (kg/yr)	Mass Reduction (kg/yr)
Total Nitrogen	10.88	95%	10.32
Total Phosphorous	1.811	95%	1.716

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 15. Park Road – South Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$33,900	$34,000
2	Stormwater Pollution Prevention	1	LS	$3,390	$4,000
3	Curbing Restoration	310	LF	$40	$13,000
4	Driveway/Sidewalk Restoration	10	SY	$50	$1,000
5	Inlet Apron	8	EA	$500	$4,000
6	Drainage Pipe (36" HDPE) w/ Trench Restoration	220	LF	$200	$44,000
7	Exfiltration Trench w/ Trench Restoration	670	LF	$230	$155,000
8	Pollution Retardant Baffle	8	EA	$600	$5,000
9	Catch Basin	2	EA	$7,000	$14,000
10	Curb Inlet Catch Basin	4	EA	$10,000	$40,000
11	Manhole	5	EA	$8,000	$40,000
12	Core Drill Existing Structure	2	EA	$1,000	$2,000
13	Utility Sleeves and Adjustments (15%)	1	LS	$20,700	$21,000
14	Professional Services	1	LS	$50,850	$51,000
15	Contingency	1	LS	$84,750	$85,000
				TOTAL	$513,000

E. SW 55th Avenue

Project Location

The SW 55th Avenue project sub-basin falls along SW 55th Avenue, just north of McTyre Park and east of Infinity Azure Villas residential development. The project location is outlined in the figure below, Figure 15.

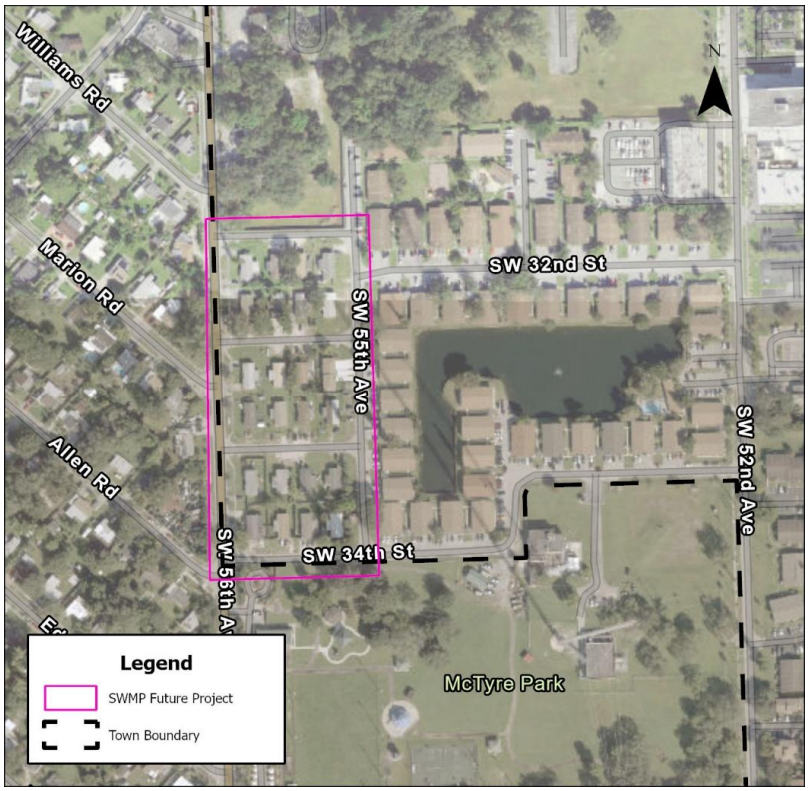


Figure 14. SW 55th Avenue Project Location

Existing and Future Conditions

This sub-basin consists of approximately 8.95 acres of an existing single-family development with approximately 1,900 LF of roadway. The current stormwater system consists of drainage inlets in an isolated system. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 16. SW 55th Avenue Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
SW 55th Avenue	No	No	No	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends the addition of an exfiltration trench as well as the addition of catch basins throughout the project area. The overall flow of water to the existing outfall to the east of the development is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently disrupts uninterrupted flow to the outfall resulting in ponding or flooding. The proposed improvements will connect and compliment the stormwater system at Infinity Azure home development, eventually reaching an outfall into the lake on site. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area to the lake for two major pollutants.

Table 17. SW 55th Avenue Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	62.86	97%	60.85
Total Phosphorous	14.09	97%	13.639

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 18. SW 55th Avenue Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$68,500	$69,000
2	Stormwater Pollution Prevention	1	LS	$6,850	$7,000
3	Inlet Apron	5	EA	$500	$3,000
4	Drainage Pipe (36" HDPE) w/ Trench Restoration	300	LF	$200	$60,000
5	Exfiltration Trench w/ Trench Restoration	2,075	LF	$230	$478,000
6	Pollution Retardant Baffle	16	EA	$600	$10,000
7	Catch Basin	1	EA	$7,000	$7,000
8	Manhole	13	EA	$8,000	$104,000
9	Core Drill Existing Structure	14	EA	$1,000	$14,000
10	Utility Sleeves and Adjustments	1	LS	$8,550	$9,000
11	Professional Services	1	LS	$102,750	$103,000
12	Contingency	1	LS	$171,250	$172,000
				TOTAL	$1,036,000

F. SW 36th Court

Project Location

The SW 36th Court project sub-basin falls along SW 36th Court, just west of SW 48th Avenue and south of Lake Forest Elementary School. The project location is outlined in the figure below, Figure 16.

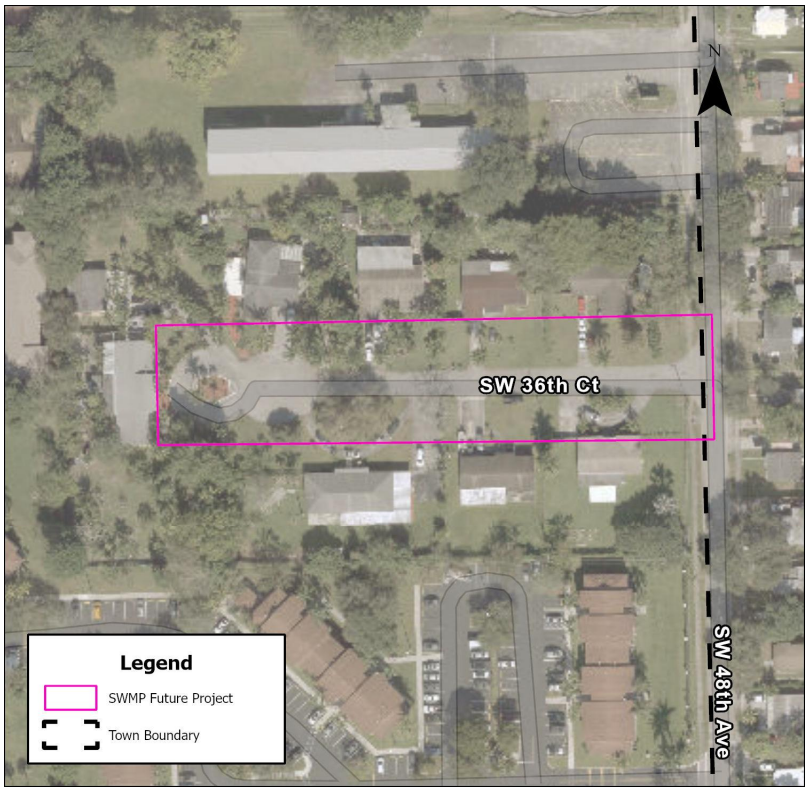


Figure 15. SW 36th Court Project Location

Existing and Future Conditions

This sub-basin consists of approximately 1.69 acres of an existing detached single-family development with approximately 500 LF of roadway. There is currently an absence of any stormwater infrastructure along this portion of road. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 19. SW 36th Court Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
SW 36th Court	No	No	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the lack of existing drainage infrastructure is the cause for not meeting the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: It is KHA's recommendation that most of the existing swales be regraded and that new swales be constructed in flatter areas more susceptible to flooding. The cumulative length of the proposed swales is approximately 600 LF. The swales are to be designed with a minimum width of 4 feet and a minimum depth of 0.5 feet.

KHA recommends the addition of exfiltration trench as well as the addition of catch basins throughout the project area. The overall flow of water is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets and connected to the existing system along SW 48th Avenue. The lack of existing stormwater infrastructure and connectivity results in flooding and ponding. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area for two major pollutants.

Table 20. SW 36th Court Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	9.03	97%	8.77
Total Phosphorous	1.426	97%	1.385

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 21. SW 36th Court Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$29,300	$30,000
2	Stormwater Pollution Prevention	1	LS	$2,930	$3,000
3	Driveway/Sidewalk Restoration	100	SY	$50	$5,000
4	Inlet Apron	9	EA	$500	$5,000
5	Drainage Pipe (36" HDPE) w/ Trench Restoration	180	LF	$200	$36,000
6	Exfiltration Trench w/ Trench Restoration	455	LF	$230	$105,000
7	Pollution Retardant Baffle	10	EA	$600	$6,000
8	Catch Basin	9	EA	$7,000	$63,000
9	Manhole	6	EA	$8,000	$48,000
10	Core Drill Existing Structure	1	EA	$1,000	$1,000
11	Swale Restoration	300	SY	$3	$1,000
12	Utility Sleeves and Adjustments	1	LS	$22,050	$23,000
13	Professional Services	1	LS	$43,950	$44,000
14	Contingency	1	LS	$73,250	$74,000
				TOTAL	$444,000

G. SW 52nd Avenue

Project Location

The SW 52nd Avenue project sub-basin falls along SW 52nd Avenue, just south of Watkins Elementary School, east of Pembroke Park Apartments, and north of NE 215th Street. The project location is outlined in the figure below, Figure 17.

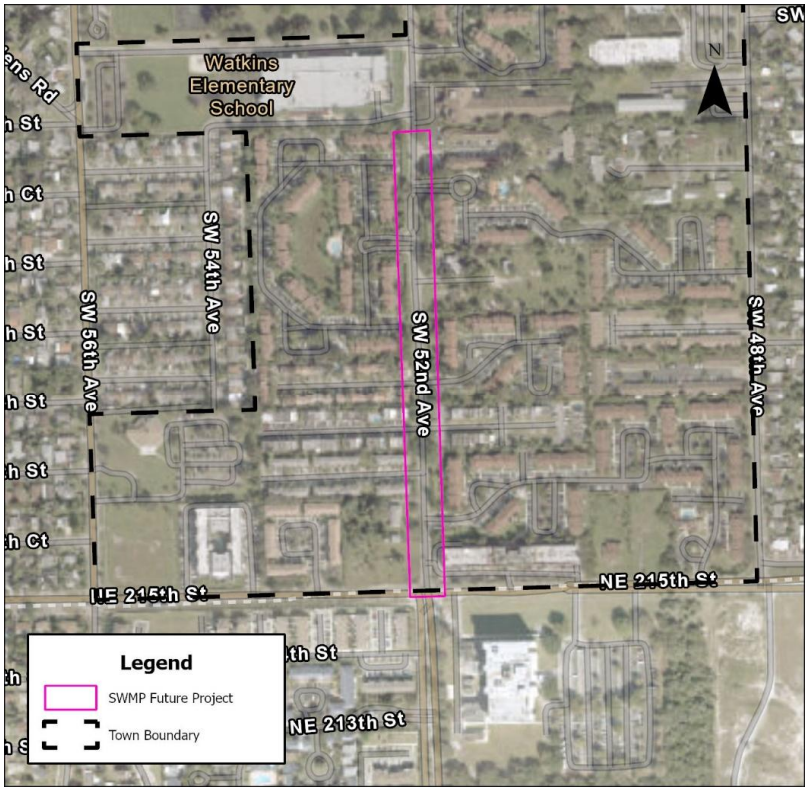


Figure 16. SW 52nd Avenue Project Location

Existing and Future Conditions

This sub-basin consists of approximately 6.06 acres of existing roadway adjacent to multi-family home developments with approximately 1,800 LF of roadway. The current stormwater system consists of some drainage inlets. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 22. SW 52nd Avenue – Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
SW 52nd Avenue	No	No	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: It is KHA's recommendation that most of the existing swales be regraded and that new swales be constructed in flatter areas more susceptible to flooding. The cumulative length of the proposed swales is approximately 1,500 LF. The swales are to be designed with a minimum width of 4 feet and a minimum depth of 0.5 feet.

KHA recommends the addition of an exfiltration trench as well as the addition of catch basins throughout the project area. The overall flow of water to the existing outfall is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets, curb inlets, as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently results in ponding or flooding. The proposed improvements will connect the stormwater system to the system that exists along SW 52nd Avenue. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area for two major pollutants.

Table 23. SW 52nd Avenue Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	67.7	95%	64.18
Total Phosphorous	15.174	95%	14.385

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 24. SW 52nd Avenue Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$67,200	$68,000
2	Stormwater Pollution Prevention	1	LS	$6,720	$7,000
3	Driveway/Sidewalk Restoration	70	SY	$50	$4,000
4	Inlet Apron	19	EA	$500	$10,000
5	Drainage Pipe (36" HDPE) w/ Trench Restoration	380	LF	$200	$76,000
6	Exfiltration Trench w/ Trench Restoration	1,780	LF	$230	$410,000
7	Pollution Retardant Baffle	18	EA	$600	$11,000
8	Catch Basin	8	EA	$7,000	$56,000
9	Curb Inlet Catch Basin	2	EA	$10,000	$20,000
10	Manhole	7	EA	$8,000	$56,000
11	Core Drill Existing Structure	17	EA	$1,000	$17,000
12	Swale Restoration	330	SY	$3	$1,000
13	Utility Sleeves and Adjustments	1	LS	$10,400	$11,000
14	Professional Services	1	LS	$100,800	$101,000
15	Contingency	1	LS	$168,000	$168,000
				TOTAL	$1,016,000

H. SW 31st Avenue – North

Project Location

The SW 31st Avenue – North project sub-basin falls along SW 31st Avenue, just south of West Pembroke Road. The project location is outlined in the figure below, Figure 18.

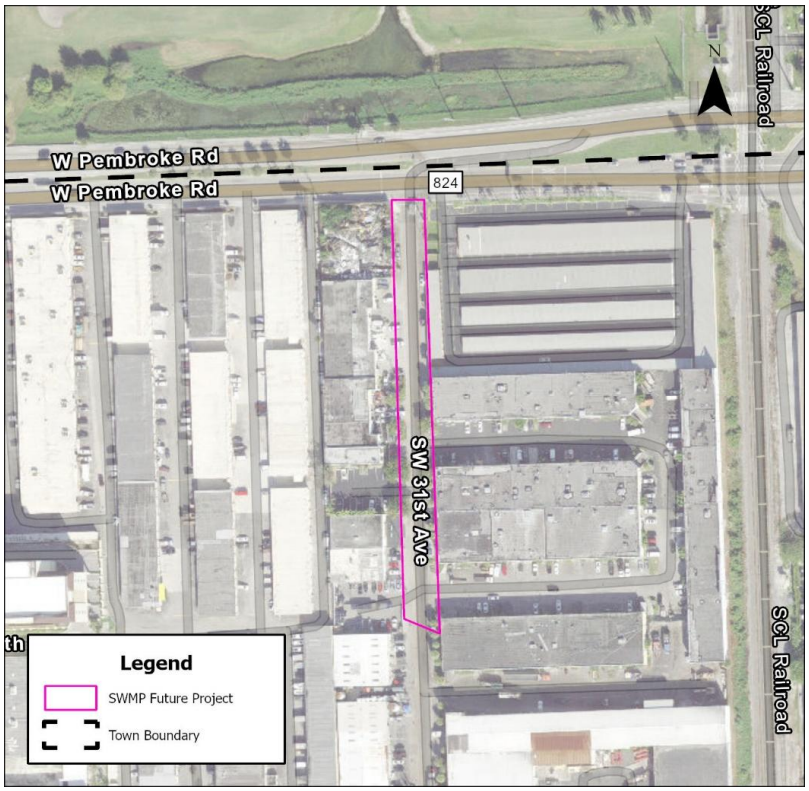


Figure 17. SW 31st Avenue – North Project Location

Existing and Future Conditions

This sub-basin consists of approximately 0.88 acres of existing industrial development adjacent with approximately 700 LF of roadway. The current stormwater system consists of a sparsely scattered drainage inlets. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 25. SW 31st Avenue – North Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
SW 31st Avenue	No	Yes	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends the addition of an exfiltration trench as well as the addition of catch basins throughout the project area. The overall flow of water is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently results in ponding or flooding. The proposed improvements will connect to the southern phase of this project, described in the next section, to promote connectivity throughout the project area along SW 31st Avenue. Unique to this project, we propose full asphalt restoration due to the poor condition of the road and to adjust elevations to better facilitate stormwater conveyance to the proposed inlets. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area for two major pollutants.

Table 26. SW 31st Avenue – North Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	5.08	95%	4.82
Total Phosphorous	1.102	95%	1.044

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 27. SW 31st Avenue – North Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$45,800	$46,000
2	Stormwater Pollution Prevention	1	LS	$4,580	$5,000
3	Curbing Restoration	25	LF	$40	$1,000
4	Asphalt Restoration	1,700	SY	$70	$119,000
5	Inlet Apron	4	EA	$500	$2,000
6	Drainage Pipe (36" HDPE) w/ Trench Restoration	250	LF	$200	$50,000
7	Exfiltration Trench w/ Trench Restoration	710	LF	$230	$164,000
8	Pollution Retardant Baffle	17	EA	$600	$11,000
9	Catch Basin	4	EA	$7,000	$28,000
10	Curb Inlet Catch Basin	2	EA	$10,000	$20,000
11	Manhole	6	EA	$8,000	$48,000
12	Core Drill Existing Structure	7	EA	$1,000	$7,000
13	Utility Sleeves and Adjustments	1	LS	$7,300	$8,000
14	Professional Services	1	LS	$68,700	$69,000
15	Contingency	1	LS	$114,500	$115,000
				TOTAL	$693,000

I. SW 31st Avenue - South

Project Location

The SW 31st Avenue – South Part I project sub-basin falls along SW 31st Avenue, just north of Carolina Street. The project location is outlined in the figure below, Figure 19.

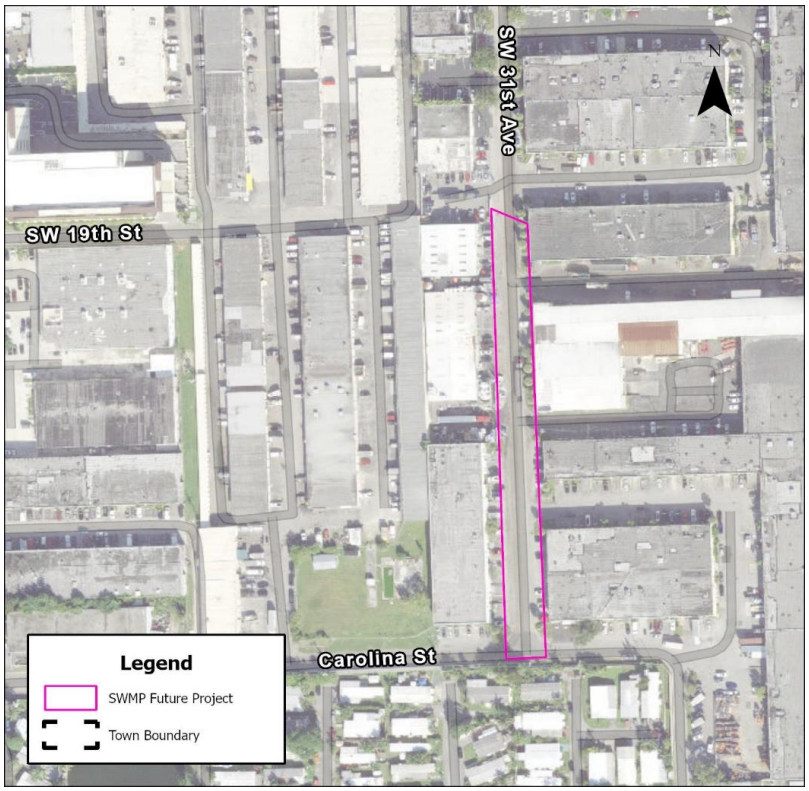


Figure 18. SW 31st Avenue - South Project Location

Existing and Future Conditions

This sub-basin consists of approximately 1.02 acres of existing industrial development adjacent to manufactured home developments with approximately 720 LF of roadway. The current stormwater system consists of sparsely scattered drainage inlets. Some of the inlets along this portion of road fall behind curbing which inhibits the flows to the structures causing further flooding. Since the site is already developed, it is anticipated that future development conditions will not vary significantly from the existing conditions.

Using the data taken from GIS, LiDAR, as-built drawings, site visits and ICPR models KHA determined that the current stormwater system fails largely due to the absence of connectivity and drainage structures.

Performance Goal Analysis

Based on the detailed hydrologic and hydraulic calculations for this project area (Appendix B), the majority of the modeled drainage areas within the project area do not currently meet the Town of Pembroke Park's performance goals. The table below shows the performance of the project versus performance goals. "Yes" means the given drainage area within the sub-basin meets the performance goal, and "No" means that the given drainage area within the sub-basin does not meet the performance goal.

Table 28. SW 31st Avenue – South Performance Goal Analysis

Project/Basin	Water Quality (Volume)	10-Year Storm	100-Year Storm	Observed Flooding or Complaints
SW 31st Avenue	No	Yes	Yes	Yes

Storm Drainage Deficiencies

Inadequate Drainage Infrastructure: Based on the hydrologic and hydraulic calculations for this project area, the existing drainage infrastructure does not discharge quickly enough to meet the desired performance criteria. Improvements to drainage infrastructure will be needed to address these inadequacies.

Recommended Drainage Improvements

Capital Improvements: KHA recommends the addition of an exfiltration trench as well as the addition of catch basins throughout the project area. The overall flow of water is to be facilitated through the proposed main trunk line exfiltration trench system that is fully connected with pipes. These pipes will be connected to the proposed catch basin inlets as well as core drilled into the existing inlets. The lack of existing connectivity and underground storage currently results in ponding or flooding. The proposed improvements will connect the stormwater system to the system that is along Carolina Street and was designed to complement the permitted plans for John P. Lyons by Keith Engineers which is anticipated to start construction by 2025. As referenced in the previous section outlining the northern portion of SW 31st Avenue, we propose full asphalt restoration due to the poor condition of the road and adjust elevations to better facilitate stormwater conveyance to the proposed inlets. Any driveways impacted are to be reconstructed at elevations that match the existing conditions. Concrete aprons on both existing and proposed catch basin inlets are to be renewed or designed to mitigate the surrounding landscaped area's impedance of roadway runoff flow.

Refer to Appendix A for a map series depicting proposed improvements.

Environmental Impact of Proposed Improvements

A full analysis of the estimated pollutant loading for existing and proposed conditions was prepared for the project area and can be found in Appendix C. The table below shows how the proposed improvements will result in significant reduction in the pollutant load contribution from this project area for two major pollutants.

Table 29. SW 31st Avenue – South Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction	Mass Reduction (kg/yr)
Total Nitrogen	5.89	95%	5.59
Total Phosphorous	1.277	95%	1.211

Capital Improvement Budget

The following cost estimates were developed for the proposed stormwater capital improvements.

Table 30. SW 31st Avenue – South Capital Improvement Costs

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/ MOT/ Clearing & Grubbing	1	LS	$49,200	$50,000
2	Stormwater Pollution Prevention	1	LS	$4,920	$5,000
3	Curbing Restoration	25	LF	$40	$1,000
4	Asphalt Restoration	1,700	SY	$70	$119,000
5	Inlet Apron	9	EA	$500	$5,000
6	Drainage Pipe (36" HDPE) w/ Trench Restoration	200	LF	$200	$40,000
7	Exfiltration Trench w/ Trench Restoration	700	LF	$230	$161,000
8	Pollution Retardant Baffle	12	EA	$600	$8,000
9	Catch Basin	9	EA	$7,000	$63,000
10	Curb Inlet Catch Basin	2	EA	$10,000	$20,000
11	Manhole	8	EA	$8,000	$64,000
12	Core Drill Existing Structure	3	EA.	$1,000	$3,000
13	Utility Sleeves and Adjustments	1	LS	$7,750	$8,000
14	Professional Services	1	LS	$73,800	$74,000
15	Contingency	1	LS	$123,000	$123,000
				TOTAL	$744,000

CAPITAL IMPROVEMENT PROGRAM

I. Background

Kimley-Horn prepared this Capital Improvement Program (CIP) to prioritize and set budgets required to plan, construct, operate and maintain the Town's Storm Water Management Program. The CIP is a tool intended to provide an order of magnitude for the Town's yearly funding for the implementation of the recommended projects in this Stormwater Master Plan.

The proposed CIP is based on the findings of the assessment of existing drainage improvements in each of the priority project areas. Detailed analysis of nine drainage projects were conducted and Kimley-Horn has validated the recommended order of prioritization to assist the Town in prioritizing and setting budget conditions. The two major components of the CIP are: the Operation and Maintenance Plan and the Budget and Prioritization breakdown.

The Operation and Maintenance Plan is based on the general assessment of the existing drainage conditions within the Town's border and the existing system's limitations. The recommended operation and maintenance procedures are identified below, along with the preliminary budget estimates based on the annual implementation of these procedures.

The Budget and Prioritization component is based on the findings found during the analysis of the nine priority project areas. Preliminary opinions of probable costs (budgets) were prepared for each project area. Based on these preliminary budgets, the priority project area improvements were grouped and phased to provide flexibility with the Town's budget. The following is a detailed explanation and summary of each component of the CIP.

II. Operation and Maintenance Plan

The implementation and continued updates to the Operation and Maintenance Plan (O&M Plan) will allow the Town to maintain the integrity of its stormwater management system and ensure that it continues to operate at design capacity. An O&M Plan will also prepare the Town to comply with the MS4 requirements as required by State and Federal NPDES regulations. The Town is a co-permittee under the MS4 for Broward County. The majority of the MS4 permit requirements are directly related to operation and maintenance of the stormwater infrastructure with particular emphasis on water quality pre-treatment. Periodic observations, routine maintenance, and general improvements are also required. This section of the Stormwater Master Plan is not intended to serve as a complete operation and maintenance manual, but to provide enough information and guidance to allocate sufficient budget to stormwater infrastructure operations and maintenance costs.

A. Street Sweeping

The Town should continue to invest resources in street sweeping. This activity cleans intake structures, reduces debris deposition within the pipe network, and contributes to the aesthetics of the Town. Generally, street sweeping is a positive maintenance activity that provides measurable benefits. Since pollutants, such as hydrocarbons and metals adhere to dirt particles, removing this dirt from the street system will remove the pollutants before they are allowed to discharge into the Town's exfiltration trenches and lakes.

B. Catch Basin Maintenance

Catch basin maintenance is a two-step process. This task includes cleaning the external grate to allow storm water to enter the system and removing sand, silt and debris from the sedimentation chamber of the intake structure. The catch basins should be cleaned using mechanical and manual methods. In the majority of cases, catch basins will be cleaned and maintained in response to observations following significant rain events. Upon making such observations, the Town should evaluate the general area and perform the required maintenance on the inlets and pipes within a sub-basin. Under normal conditions, catch basin maintenance is recommended every 12 months. However, because of foliage and other debris entering the system, the Town should consider conducting catch basin maintenance more frequently in some areas.

C. Pipe Flushing and Exfiltration Trench Cleaning

Exfiltration trench (French drain) is important in the storage, disposal, and water quality treatment of stormwater runoff. Maintenance of the exfiltration trench includes removing the sediment, oil, and grease that accumulate in the bottom of the catch basins attached to the exfiltration trench and pipes to reduce the amount of these pollutants entering the pipe system and adversely impacting the exfiltration or outfall rate. Even with removal of sediment from the catch basins, sediment will build up over time in drainage pipes. Therefore, the pipes should be cleaned and flushed on a regular basis. Pipe flushing is typically performed in conjunction with catch basin cleaning and can be contracted out on an as-needed basis. During this activity, a high-pressure water hose is inserted into the pipe network. This process flushes debris into the catch basin where it can then be removed. Under the MS4 permit, the Town is required to inspect all exfiltration trenches operated by the Town twice per year. If inspections yield unsatisfactory results, maintenance activities such as sediment removal from catch basins and pipe flushing will be required. It is anticipated that sediment will need to be removed from the Town catch basins once year and drainage pipes will need to be cleaned and flushed once every five years.

D. Swale Inspection, Maintenance, and Restoration

Grassed swales and landscaped medians play an important role in storm water disposal. Consistent mowing, inspection and restoration of such features promote storm water retention and efficient percolation. The Town maintains swales and medians within public roadways and individual business owners and residents are mandated through local codes to maintain their facilities. This activity should continue on a scheduled basis.

E. Lake Inspection and Water Quality Monitoring

The Town has many lakes. Consistent inspection and water quality monitoring procedures for the lakes should be established to ensure that they continue to provide both the flood protection and water quality treatment for which they were designed and to ensure the continued enjoyment of the lakes by Town residents.

It is also recommended that the Town further evaluate the pump stations connected to the lakes should the lake geometries change due to development. A reduction in lake capacity could result in additional wear on the Town's equipment caused by a change in cycle times. Adjustments or reconfigurations may be needed to accommodate the new lake geometry.

F. Minor Repairs and Improvements

Maintaining the storm water collection system requires routine improvements and repairs. This task covers a significant spectrum of activities ranging from the repair of collapsed pipes and manholes to the replacements of catch basin grates. Maintenance activities are performed in response to an immediate problem using the best methods available. These tasks often cannot be foreseen or scheduled.

G. Stormwater Pump Maintenance

Stormwater pump maintenance requires scheduling a maintenance plan every year for pump-reconditioning. This reconditioning includes changing the bearings and the mechanical seals as well as making sure that the electrical cables are not damaged in anyway. Included in the maintenance is running the pump a few cycles with clean water to help prevent the formation of deposits as well as monitor the float switches to ensure that they start and stop. During this time, also verify no sediment has formed, that every part of the pump is running smoothly and that the oil levels are appropriate.

III. MS4 Compliance

Under the MS4 permit, the Town is required to conduct inspections of the following activities:

- Evaluating, monitoring, and inspecting waste treatment, storage, and disposal facilities.

- Implementing an inspection program to detect illicit discharges and illegal connections to the stormwater management system.
- Maintaining a citizen complaint log documenting illicit discharges.
- Identifying and maintaining a GIS database of areas served by septic systems and advising the local health department of potential violations if constituents common to wastewater contamination due to malfunctioning septic tank systems are discovered.
- Advising the appropriate utility owner of potential violation if constituents common to wastewater contamination are found in areas served by sanitary sewer systems.
- Inspecting industrial and high-risk facilities for illegal discharges into the MS4.
- Requiring new construction sites to obtain NPDES permits from the FDEP prior to land clearing.
- Monitoring water quality in the canals.

It will be the Town's responsibility to show that inspections and appropriate monitoring have been conducted. It is recommended that the Town continues to coordinate in becoming a co-permittee on the Broward County MS4 permit and enter into an agreement with Broward County to provide water quality monitoring in the canals. The County charges municipalities an annual fee for this service based on the number of outfalls located within the municipal boundaries. However, the Town of Pembroke Park does not have any outfalls leading to monitored canals.

In addition to the above-mentioned inspection activities, public outreach activities and education required under the MS4 permit include:

- Providing education related to the application of pesticides, fertilizers, and herbicides.
- Publicizing the Broward County pollution complaint hotline.
- Instructing the public on the proper disposal of used motor oil, leftover hazardous household products, and lead acid batteries.
- Conducting erosion control training for construction site inspectors and contractors.

The Town is currently a member of the National Flood Insurance Program Community Rating System (CRS), the Town receives credit for public outreach programs dedicated to informing the public about the risks of flooding and steps people can take to protect themselves and their property. It is recommended that the Town conducts public outreach to comply with their MS4 permitting which can also help reduce the Town's CRS score. A lower CRS score will provide a higher discount on flood insurance for property owners.

IV. Operation and Maintenance Cost

It is assumed that the Town currently spends $200,000 per year on their operations and maintenance cost as well as $100,000 every three years to account for replacement of stormwater pumps, based on prior correspondence and previous fiscal reports. Using this estimation, KHA has created a cumulative operations and maintenance cost, seen in Table 32. This includes the Town's current structures as well as any additional structures that are currently planned. KHA has also included a 3% annual increase that has been projected throughout the 10-year CIP.

As the maintenance activities are initiated, we recommend utilizing the database of GIS information to track and schedule the maintenance and inspection activities. This process will identify the date and time that a system was last maintained and will also provide a tool to identify the next scheduled maintenance.

A. Utility Fee Collection

The Town of Pembroke Park adheres to Generally Accepted Accounting Principles (GAAP) for its budgeting and financial operations. According to these principles, the Town must use distinct accounting entities called funds to manage resources for various purposes. The Town employs two types of funds: Governmental Funds and Enterprise (or Proprietary) Funds.

Governmental Funds are used to finance most governmental functions and include the General Fund, Debt Service Fund, and General Capital Projects Fund.

Enterprise Funds account for continuous activities similar to those in the private sector, such as the Sewer Utility Fund and Storm Water Utility Fund.

V. Green Initiatives

The development of this SWMP sets the Town on a path towards identification and prioritization of stormwater infrastructure improvements that serve as the basis for flood mitigation. However, it is also an important step in jump starting the Town's evaluation of future vulnerabilities and planning for resiliency.

Future condition flooding scenarios are being studied by Broward County as mentioned in previous sections, and by the State through The Resilient Florida Program (§ 380.093, Fla. Stat.). The latter includes a grant mechanism for eligible municipalities to receive funding for resiliency planning of their critical infrastructure, including stormwater systems. The grants are geared towards both planning and implementation but require a Vulnerability Assessment (VA) as the first step since the completion of a VA renders the Town eligible for additional State funding to implement identified projects. The requirements for the VA are laid out by the same Statute and offer a sequential process to identify areas and assets of the town that are impacted by five different types of flooding, as applicable. The VA may also include other non-flooding related threats chosen for evaluation by the Town.

In addition to the benefit of eligibility for additional funding, a VA would expand on the findings of this SWMP to include additional flooding scenarios and vulnerable critical infrastructure. Likewise, the development of this SWMP supports the VA by providing priority areas, vulnerable to flooding in future conditions as they are in existing conditions, as well as localized models capable of addressing rainfall-induced flooding, one of the required analyses of the VA. With completion of the SWMP and VA the Town will have a robust list of threats, vulnerabilities, and most importantly resiliency solutions that will benefit the community for years to come.

At the time of this report, a VA is being prepared for the Town.

VI. Drainage Capital Projects

The Capital Improvement Program (CIP) is based on the results of the analysis of the nine (9) priority projects. Recommended improvements to achieve the stated performance goals were identified for each project area. The recommended improvements were quantified based on the available data and preliminary opinions of probable costs (preliminary budgets) were prepared for each project area. Prior to each individual project being implemented, professional services such as surveying, engineering, and permitting will be required and are included within the budgets. The budget figures were developed by reviewing recent costs from similar projects. The CIP budgets are based on 2024 market conditions.

The following assumptions have been made in the formulation of the budgets for the drainage improvements:

- The budgets include the recommended improvements identified in the analysis of the nine (9) priority sub-basin projects.
- Projects were separated by sub-basin and/or section of identified roadway.
- The budgets include restoration of the roadway impacted by the proposed trenching, but do not include any additional roadway resurfacing; with the exception of SW 31st Avenue North and South. It is assumed that roadway resurfacing will be completed concurrently with the proposed drainage projects, but that the Town will have a separate roadway resurfacing budget.
- The budgets do not include any costs of obtaining construction easements. A budget of $30,000 is included for obtaining easements when a new outfall is proposed although no new outfall has been proposed in this update of the Stormwater Master Plan.
- The budgets include a 10% allowance for mobilization and maintenance of traffic.
- The budgets include a 5% allowance for utility adjustments; however, some projects have many existing underground utilities, therefore, a 15% budget for adjustments was utilized.
- The budgets include a 25% contingency for each project. A relatively high contingency value is used, due to the age and level of coverage of the survey and geotechnical data available to prepare the conceptual design for the projects.

- The budgets include a minimum of $60,000 or 15% of construction cost, listed as professional services, allowance for surveying, engineering, permitting, and construction phase assistance (site observations during construction).
- The budgets include swale restoration costs to replace sod only. No budget for additional landscape improvements or restoration is included.

The budgetary numbers are an opinion of probable construction costs in the current marketplace. Unit pricing for similar projects constructed in Broward County was used as the basis for the construction budget. Based on the preliminary budgets, the proposed priority sub-basin improvements were grouped and phased to provide the ten-year capital improvement program.

A. Priority Ranking

Table 31 shows the priority ranking for the capital improvement projects. Scores were assigned and/or calculated for the categories of Hydraulic Analysis, Water Quality Treatment, Observed Flooding, Complaints, and Traffic Volumes. The basis for the calculated category scores is detailed below. The scores were then totaled, and the projects were ranked from highest to lowest.

Table 31. Project Prioritization Matrix

Priority Ranking	Project Name	Hydraulic Analysis	Water Quality Treatment	Observed Flooding	Complaints	Traffic Volumes	Total Score
1	Park Road - North - Part I	5	5	5	4	5	24
2	Park Road - North - Part II	5	5	4	4	5	23
3	Park Road - South	5	5	4	3	5	22
4	SW 31st Ave - South	5	5	5	4	1	20
7	SW 31st Ave - North	4	5	5	4	1	19
6	SW 55th Ave Homes	5	5	4	4	1	19
5	Infinity Azure	5	5	4	3	1	18
8	SW 52nd Ave - South	5	5	2	2	3	17
9	SW 36th Ct	5	5	3	2	1	16

Hydrologic and Hydraulic Analysis

1 = All water quantity performance goals met in future condition analysis.

2 = Future condition water quantity performance goals failed in less than 1/3 of drainage areas.

3 = Future condition water quantity performance goals failed in 1/3 to 1/2 of drainage areas.

4 = Future condition water quantity performance goals failed in 1/2 to all but one drainage area.

5 = Future condition water quantity performance goals failed in all of the drainage areas.

Water Quality Treatment

1 = All water quality performance goals met in future condition analysis.

2 = Future condition water quality performance goals failed in less than 1/3 of drainage areas.

3 = Future condition water quality performance goals failed in 1/3 to 1/2 of drainage areas.

4 = Future condition water quality performance goals failed in 1/2 to all but one drainage area.

5 = Future condition water quality performance goals failed in all of the drainage areas.

Complaints Scoring

1 = No complaints were reported by the Town of Pembroke Park.

2 = One complaint was reported by the Town of Pembroke Park.

3 = Two complaints were reported by the Town of Pembroke Park.

4 = Three complaints were reported by the Town of Pembroke Park.

5 = More than three complaints were reported by the Town of Pembroke Park.

Observed Flooding Scoring

1 = KHA did not observe flooding across the roadway in the sub-basin.

2 = KHA observed flooding across the roadway at one location in the sub-basin.

3 = KHA observed flooding across the roadway at two locations in the sub-basin.

4 = KHA observed flooding across the roadway at three locations in the sub-basin.

5 = KHA observed flooding across the roadway at more than three locations in the sub-basin.

Traffic Volumes

The ratings for this category are based on percentage of roadway length classified as local, collector, or arterial roadways according to the Town's Growth Management Plan.

1 = The majority of roadways in sub-basin are local roadways.

3 = The majority of roadways in sub-basin are collector roadways.

5 = The majority of roadways in sub-basin are arterial roadways.

B. Stormwater Capital Improvement Summary

The updated ten-year CIP summary is contained in Table 32. Note that the Park Road – North Part I project and the Park Road – North Part II project have the highest priority ranking scores due to a high number of citizen and town complaints and poor performance of hydraulic analyses and are projected to be implemented in the 1st and 2nd years of the CIP due to the score they received from the prioritization matrix analysis. The CIP schedule is KHA's recommendation based on the prioritization matrix and should be re-evaluated to fit the needs of the Town. The improvements proposed along Park Road should take into account the SW 25th Street project as well as the second phase of John P. Lyons Lane when the Town decides to plan for the Park Road projects. Table 32 also includes the updated operations and maintenance budget considering a 3% increase per year. The projects are recommended to be coordinated with any roadway CIP project scheduling to ensure that the drainage improvements are complete before or at the same time as the roadway improvements in the same area to ensure the road does not need to be restored twice. This may require some adjustment to the roadway CIP schedule. Additionally, the cost estimates for these projects were carried out relative to the 2024 market and dollar value. At the time of each project undertaking, these values should be adjusted to reflect and account for future inflation.

Table 32. Proposed CIP Budgets & Schedule

Proposed Project	FY 25-26	FY 26-27	FY 27-28	FY 28-29	FY 29-30	FY 30-31	FY 31-32	FY 32-33	FY 33-34	FY 34-35	TOTALS
Park Road - North - Part I	$1,026,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,026,000
Park Road - North - Part II	$0	$1,016,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,016,000
Park Road - South	$0	$0	$513,000	$0	$0	$0	$0	$0	$0	$0	$513,000
SW 31st Ave - South	$0	$0	$0	$744,000	$0	$0	$0	$0	$0	$0	$744,000
SW 31st Ave - North	$0	$0	$0	$0	$693,000	$0	$0	$0	$0	$0	$693,000
SW 55th Ave Homes	$0	$0	$0	$0	$0	$1,036,000	$0	$0	$0	$0	$1,036,000
Infinity Azure – Part I	$0	$0	$0	$0	$0	$0	$816,000	$0	$0	$0	$816,000
Infinity Azure – Part II	$0	$0	$0	$0	$0	$0	$0	$408,000	$0	$0	$408,000
SW 52nd Ave - South	$0	$0	$0	$0	$0	$0	$0	$0	$1,016,000	$0	$1,016,000
SW 36th Ct	$0	$0	$0	$0	$0	$0	$0	$0	$0	$444,000	$444,000
Operations and Maintenance	$200,000	$206,000	$312,180	$321,545	$331,192	$441,128	$454,361	$467,992	$582,032	$599,493	$3,915,923
TOTALS	$1,226,000	$1,222,000	$825,180	$1,065,545	$1,024,192	$1,477,128	$1,270,361	$875,992	$1,598,032	$1,043,493	$11,627,923

APPENDIX A – TOWNWIDE EXHIBITS

Legend

- Town Boundary
- Lake

0 450 900 1,800 Feet

Mayo St
Washington Park
Pembroke Rd
W Pembroke Rd
SW 18th St
SW 19th St
SW 20th St
SW 21st St
SW 23rd St
SW 24th St
SW 25th St
SW 26th St
SW 27th St
SW 28th St
SW 28th Ct
SW 25th Ct
SW 52nd Ave
SW 50th Ave
SW 54th Ave
SW 57th Ter
SW 57th Ave
SW 56th Ter
SW 56th Ave
SW 46th Ave
SW 44th Ave
SW 42nd Ave
SW 40th Ave
SW 32nd Ave
SW 47th Ave
SW 11th Ave
S Park Rd
John P Lyons Ln
Country Club Ln
Lake Shore Dr
Marine Dr
W Lake Dr
SW 32nd Blvd
W Hallandale Beach Blvd
SW 39th St
SW 38th St
SW 36th St
SW 33rd St
SW 32nd St
SW 32nd Dr
SW 31st Dr
SW 33rd Dr
NE 215th St
NE 214th Ln
NE 214th St
NE 213th Ter
Behan Lake
Meekins Lake
Lake Ranger
Lake Helen
Lake Margaret
Desoto Lakes
Pembroke Park
West Park
New Town Park
McTyre Park
Lake Forest Elementary School
Watkins Elementary School
Hallandale School
Gateway West
95
624
858

State of Florida, Maxar, Esri Community Maps Contributors, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

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TOWN OF PEMBROKE PARK STORMWATER MASTER PLAN UPDATE #1

TOWN BOUNDARY MAP

DATE:	MAY 2024
DESIGN:	TS
DRAWN:	EL
CHECKED:	TS
KH NO.:	143586100

Exhibit
A-1

K:\FTL_GIS\00_Project_Files\Civ_Pembroke Park\143586100 Pembroke Pk Stormwater MP Update\143586100 Pembroke Pk Stormwater MP Update.aprx

Legend

- Town Boundary

Flood Zone

- Zone A
- Zone AE
- Zone AH
- Zone D
- Zone VE
- Zone X

0 450 900 1,800 Feet

Mayo St
Washington Park
Pembroke Rd
W Pembroke Rd
SW 18th St
SW 19th St
SW 20th St
SW 21st St
SW 23rd St
SW 24th St
SW 25th St
SW 25th Ct
SW 26th St
SW 27th St
SW 28th St
SW 28th Ct
SW 51st Ave
SW 50th Ave
SW 46th Ave
SW 44th Ave
SW 42nd Ave
SW 40th Ave
SW 32nd Ave
SW 57th Ter
SW 56th Ave
Behan Lake
Meekins Lake
Pembroke Park
S Park Rd
John Piccolo Ln
Lake Ranger
Hallandale School
Gateway West
W Hallandale Beach Blvd
West Park
New Town Park
McTyre Park
Lake Forest Elementary School
Walthall Elementary School
Lake Helen
Lake Margaret
SW 32nd St
SW 33rd St
SW 31st Dr
SW 32nd Dr
SW 33rd Dr
SW 36th St
SW 38th St
SW 39th St
SW 40th St
SW 47th Ave
SW 32nd Blvd
W Lake Dr
Lake Shore Dr
Marina Dr
Country Club Ln
SW 14th Ave
Desoto Lakes
NE 215th St
NE 214th Ln
NE 214th St
NE 213th Ter
95
824
858

State of Florida, Major Participating Urban Counties FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, FEMA, NPS, US Census Bureau, USDA, USFWS

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TOWN OF PEMBROKE PARK STORMWATER MASTER PLAN UPDATE #1

FEMA FLOOD ZONE MAP

DATE:	MAY 2024
DESIGN:	TS
DRAWN:	EL
CHECKED:	TS
KH NO.:	143586100

Exhibit

A-2

K:\FTL_GIS\00_Project_Files\Civ_Pembroke Park\143586100 Pembroke Pk Stormwater MP Update\143586100 Pembroke Pk Stormwater MP Update.aprx

Legend

- Town Boundary
- Lake

Existing Structure Type

- Catch Basin
- Control Structure
- End Section
- Inlet
- Junction Box
- Manhole
- Pipe Outlet

Future Storm Structure

- Catch Basin
- Manhole
- Outfall

Stormwater Pumps

- Prop. 25th Street Pump
- Prop. John P. Lyons Pump
- Pump 1
- Pump 2
- Pump 3
- Pump 4
- Pump 5

0 450 900 1,800 Feet

Mayo St
Pembroke Rd
W Pembroke Rd
SW 18th St
SW 19th St
SW 20th St
SW 21st St
SW 23rd St
SW 24th St
SW 25th St
SW 26th St
SW 27th St
SW 28th St
SW 57th Ter
SW 56th Ave
SW 46th Ave
SW 44th Ave
SW 42nd Ave
SW 40th Ave
SW 32nd Ave
SW 47th Ave
SW 31st Dr
SW 32nd Dr
SW 33rd Dr
SW 36th St
SW 38th St
SW 39th St
SW 40th St
SW 32nd St
SW 33rd St
SW 32nd Blvd
SW 24th Ct
SW 26th Ct
SW 27th Ct
SW 28th Ct
SW 29th Ct
NE 215th St
NE 214th Ln
NE 214th St
NE 213th Ter
Hallandale Beach Blvd
W Hallandale Beach Blvd
Behan Lake
Meekins Lake
Pembroke Park
Lake Rangel
Lake Helen
Lake Margaret
Desoto Lakes
West Park
New Town Park
McTyrie Park
Lake Forest Elementary School
Watkins Elementary School
Gateway West
Hallandale School
John P. Lyons Pkwy
Lake Shore Dr
W Lake Dr
Marine Dr
Country Club Ln
SW 11th Ave
SW 56th Ave
SW 57th Ave
SW 56th Ter
SW 47th Ave
SW 11th Ave
NE 1
85
95
25

State of Florida, Maxar, Esri Community Maps Contributors, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

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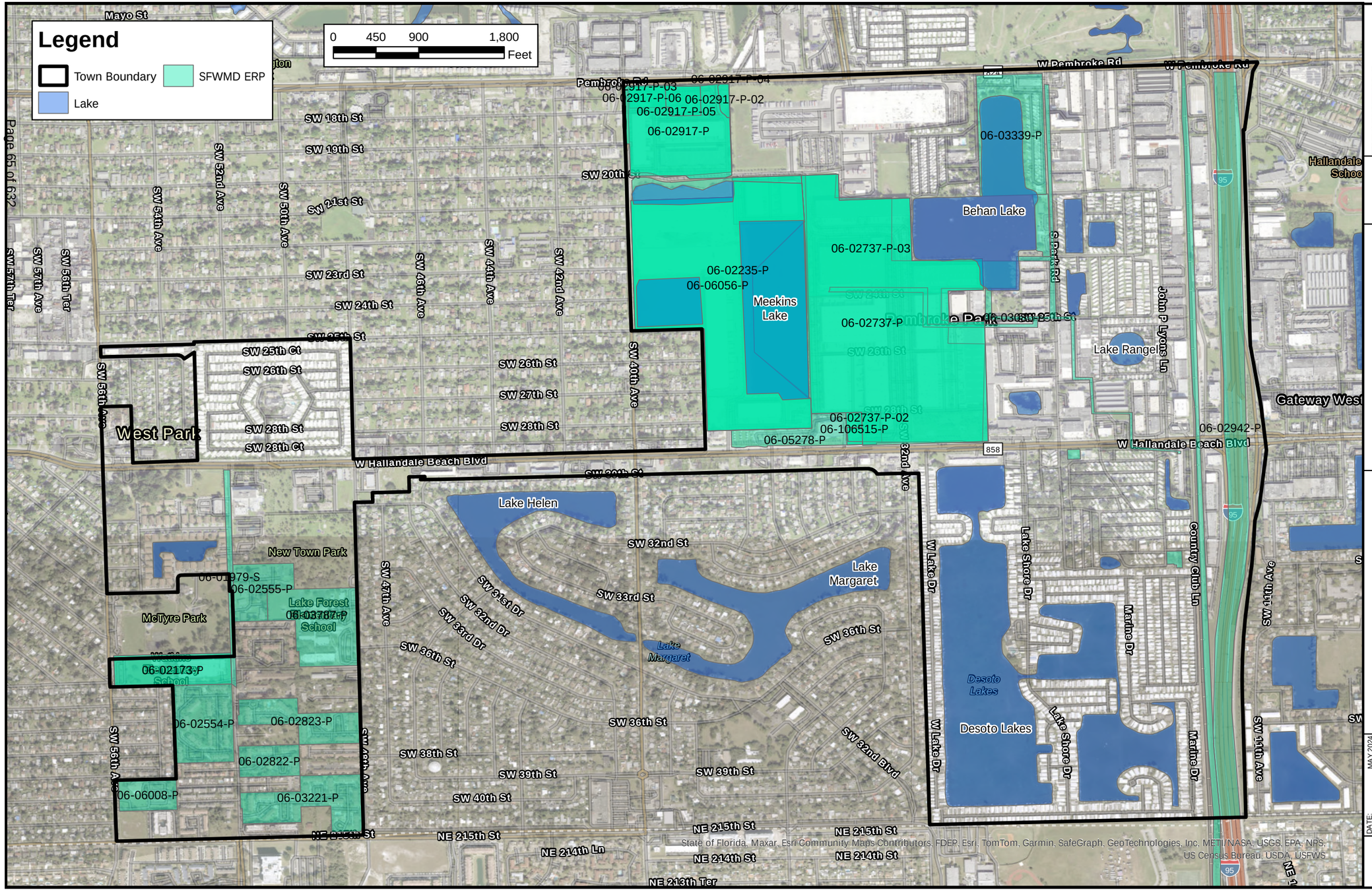
TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN UPDATE #1

EXISTING / PROPOSED STORM STRUCTURE MAP

DATE:	MAY 2024
DESIGN:	TS
DRAWN:	EL
CHECKED:	TS
KH NO.:	143586100

Exhibit
A-3

K:\FTL_GIS\00_Project_Files\CIV_Pembroke Park\143586100 Pembroke Pk Stormwater MP Update\143586100 Pembroke Pk Stormwater MP Update.aprx



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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

SFWMD ENVIRONMENTAL
RESOURCE PERMIT MAP

DATE:	MAY 2024
DESIGN:	TS
DRAWN:	EL
CHECKED:	TS
KH NO.:	143586100

Exhibit
A-4

K:\FTL_GIS\00_Project_Files\Civ_Pembroke Park\143586100 Pembroke Pk Stormwater MP Update\143586100 Pembroke Pk Stormwater MP Update.aprx

Legend

- Town Boundary
- Permit Delineated Basins

0 450 900 1,800 Feet

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18 B-19 B-20 B-21 B-22 B-23 B-24 B-25 B-26 B-27 B-28 B-29 B-30 B-31 B-32 B-33 B-34 B-35 B-36 B-37 B-38 B-39

Behan Lake
Meekins Lake
Lake Rangel
Lake Helen
Lake Margaret
Desoto Lakes

Pembroke Park
West Park
Washington Park
New Town Park
McTyre Park
Lake Forest Elementary School
Hallandale School
Gateway West

Mayo St
Pembroke Rd
W Pembroke Rd
W Hallandale Beach Blvd
SW 18th St
SW 19th St
SW 20th St
SW 21st St
SW 23rd St
SW 24th St
SW 25th St
SW 25th Ct
SW 26th St
SW 27th St
SW 28th St
SW 28th Ct
SW 32nd St
SW 33rd St
SW 36th St
SW 38th St
SW 39th St
SW 40th St
NE 215th St
NE 214th Ln
NE 214th St
NE 213th Ter
SW 52nd Ave
SW 54th Ave
SW 50th Ave
SW 46th Ave
SW 44th Ave
SW 42nd Ave
SW 40th Ave
SW 57th Ter
SW 57th Ave
SW 56th Ter
SW 56th Ave
SW 47th Ave
SW 32nd Ave
SW 31st Dr
SW 32nd Dr
SW 33rd Dr
SW 32nd Blvd
S Park Rd
John P Lyon Ln
Lake Shore Dr
W Lake Dr
Marine Dr
Country Club Ln
SW 11th Ave
NE 1

State of Florida, Maxar, Esri Community Maps Contributors, FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

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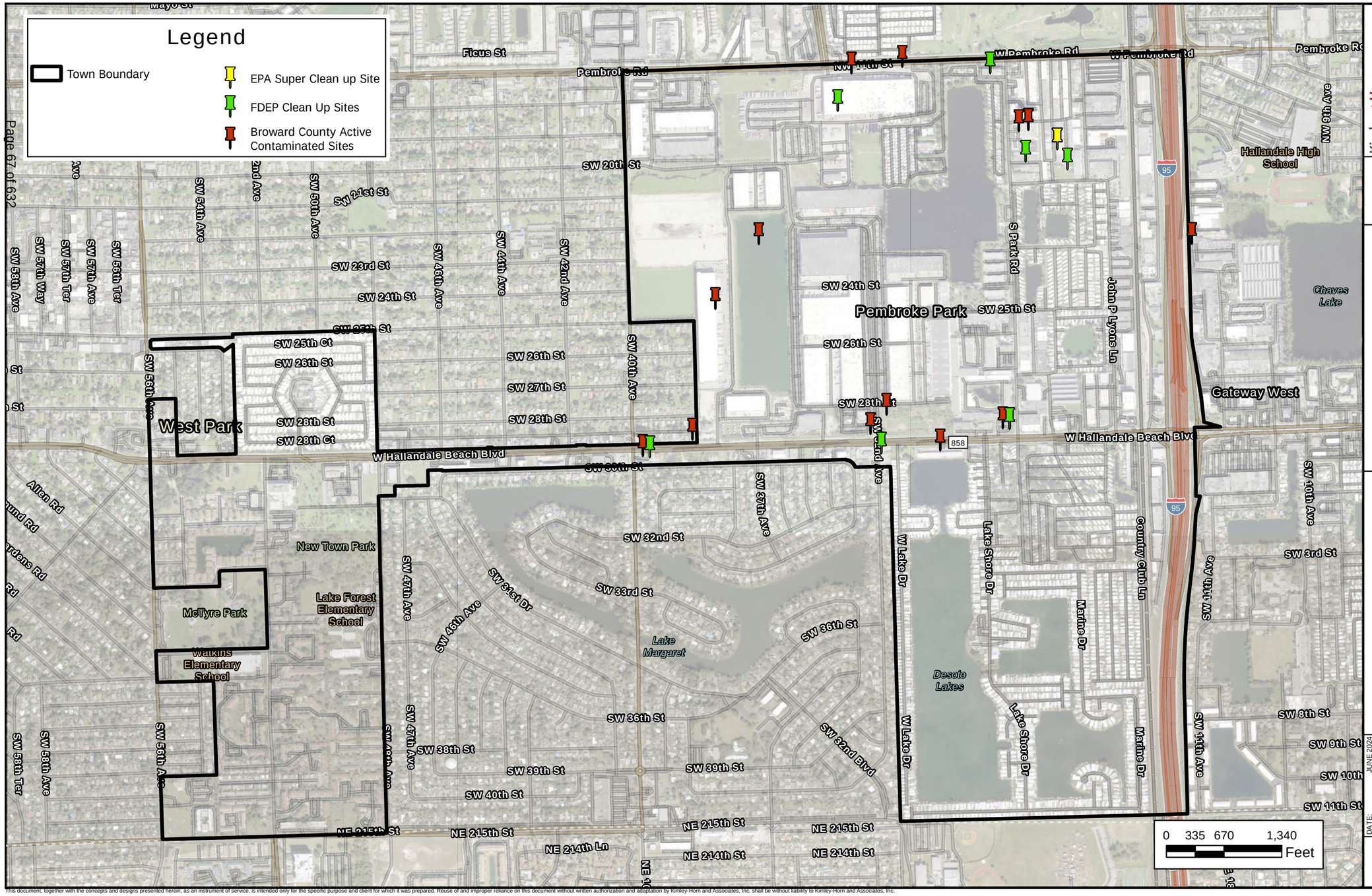
TOWN OF PEMBROKE PARK STORMWATER MASTER PLAN UPDATE #1

PERMIT DELINEATED BASIN MAP

DATE:	MAY 2024
DESIGN:	TS
DRAWN:	EL
CHECKED:	TS
KH NO.:	143586100

Exhibit
A-5

K:\FTL_GIS\00_Project_Files\Civ_Pembroke Park\143586100 Pembroke Pk Stormwater MP Update\143586100 Pembroke Pk Stormwater MP Update.aprx



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TOWN OF PEMBROKE PARK STORMWATER MASTER PLAN UPDATE #1

EPA, FDEP, & BROWARD COUNTY CONTAMINATED SITE MAP

DATE:	JUNE 2024
DESIGN:	DIM
DRAWN:	DIM
CHECKED:	TS
KH NO.:	143586100

SHEET
A-6

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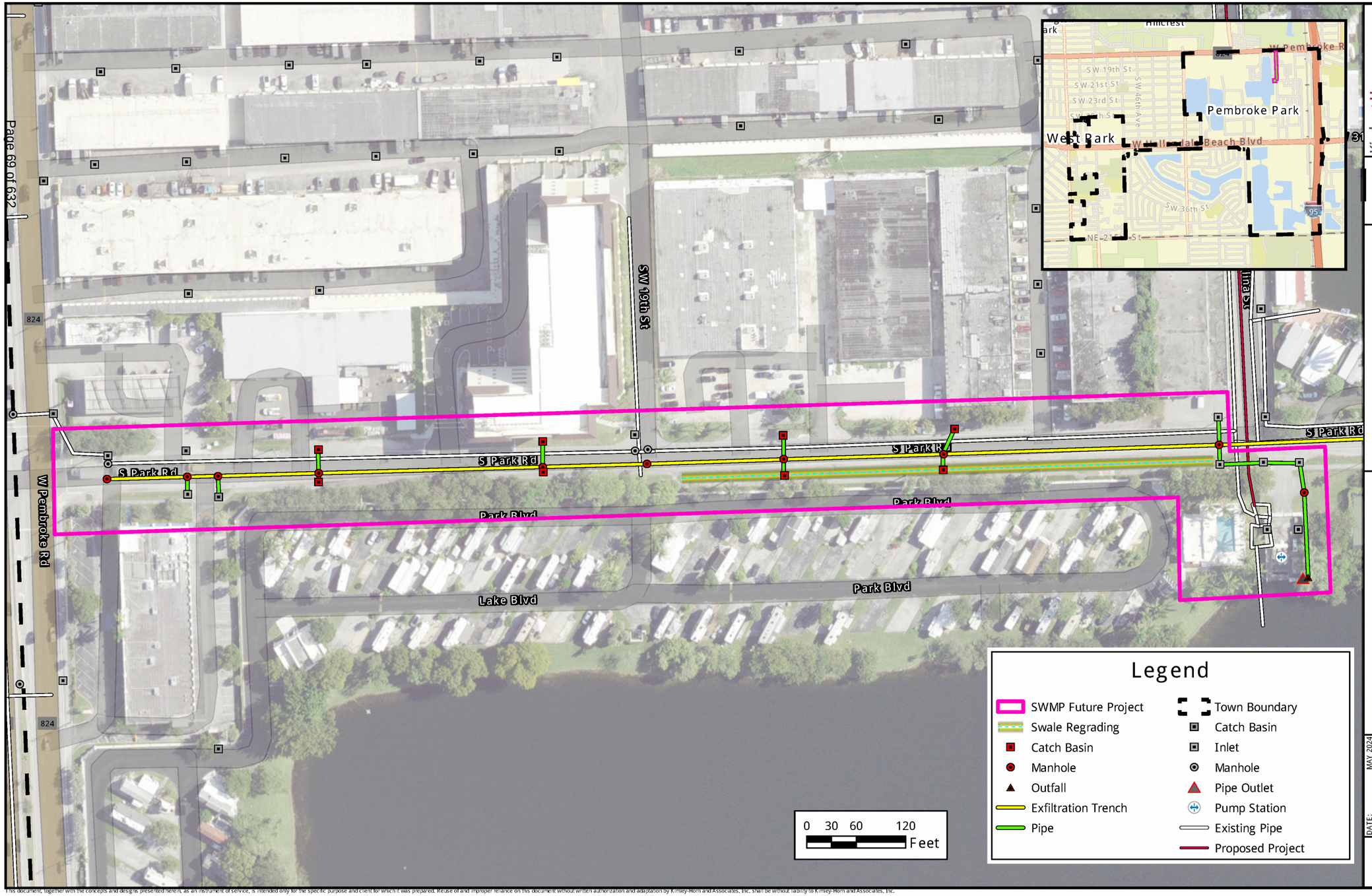
TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

INFINITY AZURE HOMES
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DIM
DRAWN:	DIM
CHECKED:	TS
KH NO.:	143586100

SHEET
1



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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

PARK ROAD - NORTH PART 1
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DJM
DRAWN:	DJM
CHECKED:	TS
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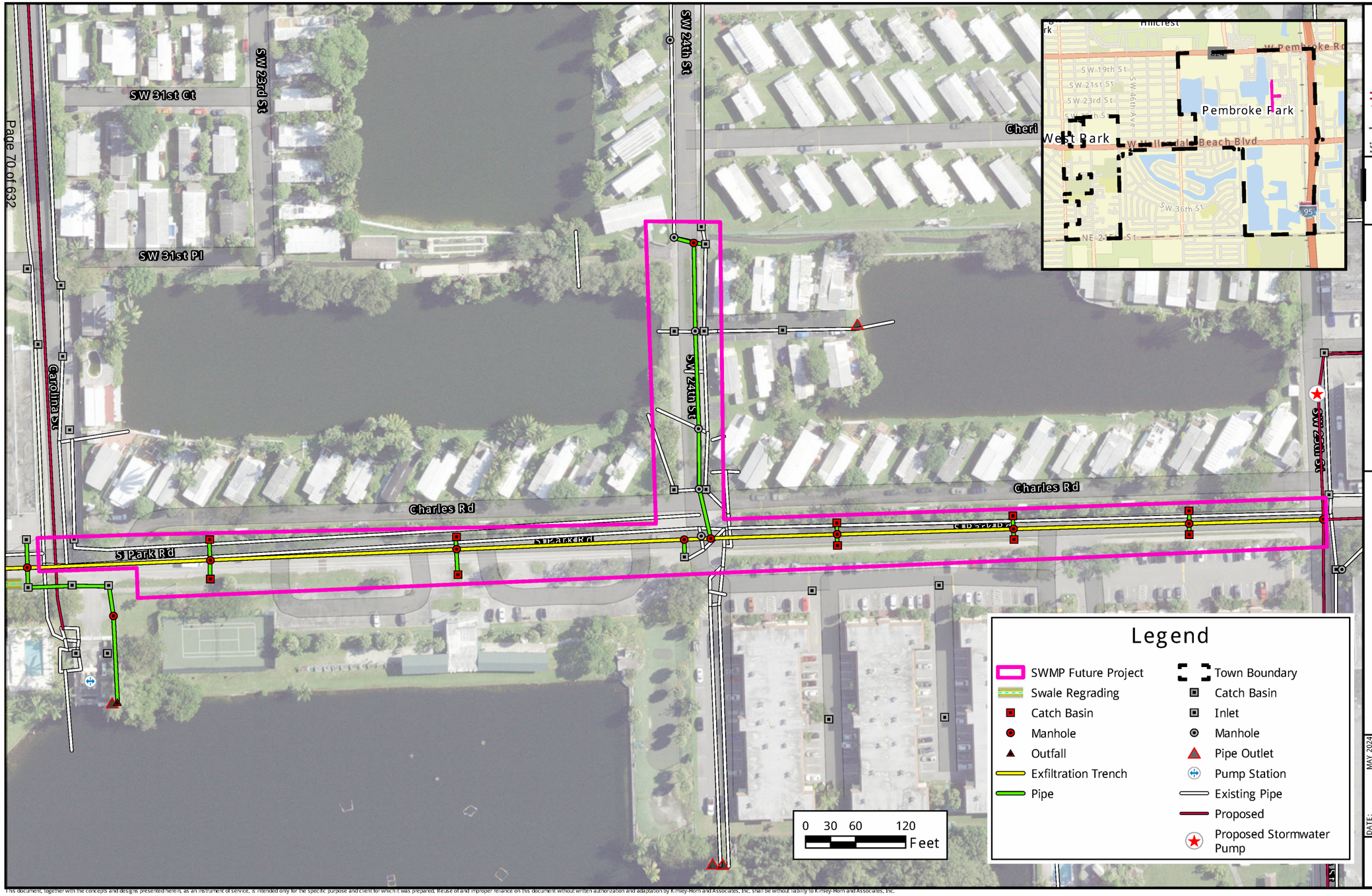

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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

PARK ROAD - NORTH PART 2
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DJM
DRAWN:	DJM
CHECKED:	TS
KH NO.:	143586100

SHEET
1

Legend

- SWMP Future Project
- Catch Basin
- Manhole
- Exfiltration Trench
- Pipe
- Town Boundary
- Catch Basin
- Inlet
- Manhole
- Pipe Outlet
- Existing Pipe
- Proposed Project

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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

PARK ROAD - SOUTH
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
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DRAWN:	DIM
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KH NO.:	143586100

SHEET
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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

SW 31ST AVE - NORTH
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DIM
DRAWN:	DIM
CHECKED:	TS
KH NO.:	143586100

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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

SW 36TH CT
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DIM
DRAWN:	DIM
CHECKED:	TS
KH NO.:	143586100

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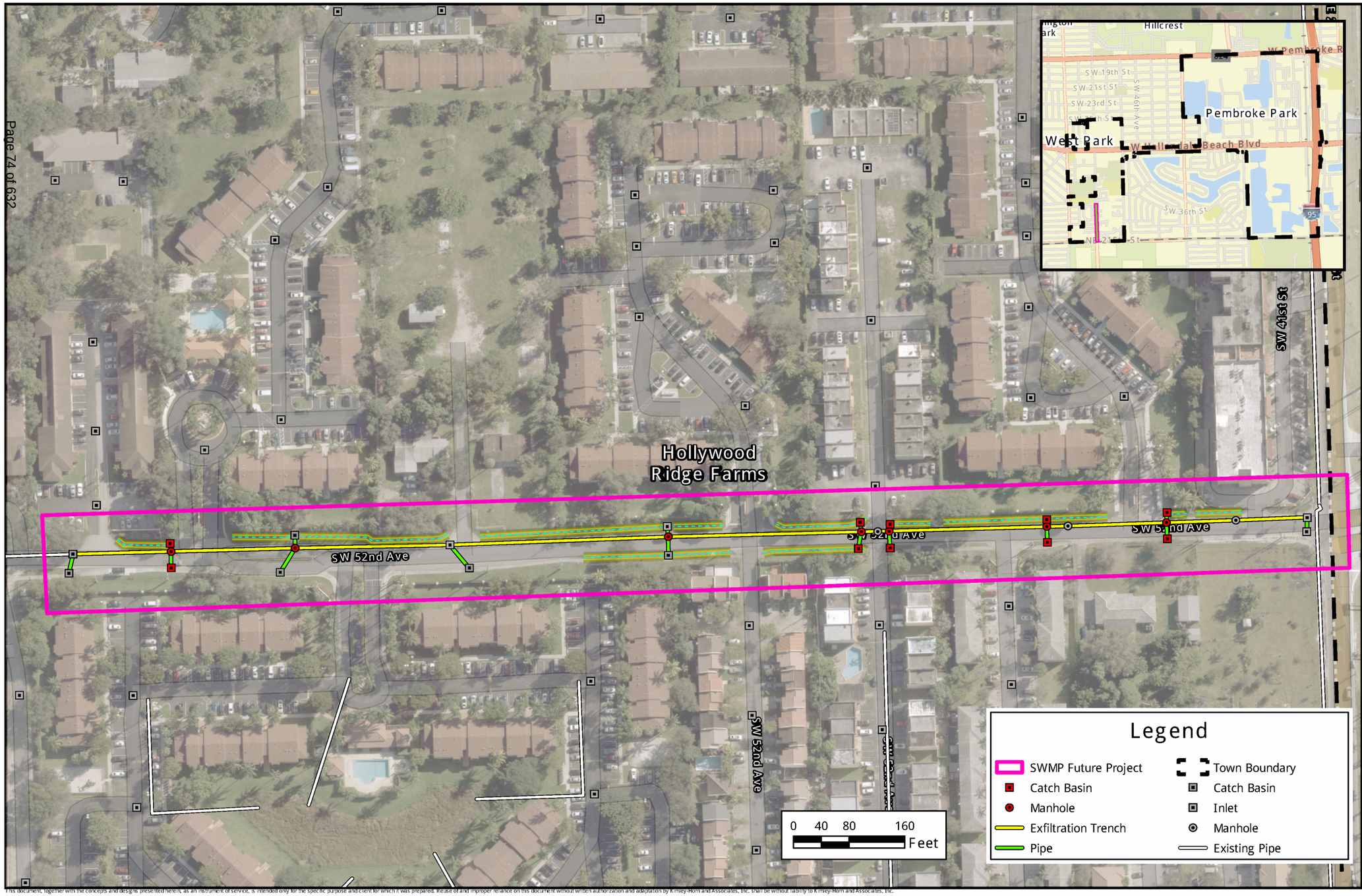

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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

SW 52ND AVE
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DIM
DRAWN:	DIM
CHECKED:	TS
KH NO.:	143586100

SHEET
1

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TOWN OF PEMBROKE PARK
STORMWATER MASTER PLAN
UPDATE #1

SW 55TH AVE HOMES
DRAINAGE IMPROVEMENTS

DATE:	MAY 2024
DESIGN:	DJM
DRAWN:	DJM
CHECKED:	TS
KH NO.:	143586100

SHEET
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APPENDIX B – PROPOSED IMPROVEMENTS EXHIBITS

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	1.70E-04	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	1,965.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	4.80	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	4.00	ft
Top of Trench Elevation	3.13	ft-NAVD
Bottom of Trench Elevation	-0.87	ft-NAVD
Distance from EL_{inv} and CE (H_2)	3.80	ft
Unsaturated Trench Depth (Du)	2.13	ft
Saturated Trench Depth (Ds)	1.87	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	0.823	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	5.35E-05	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	1,350.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	4.80	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	4.00	ft
Top of Trench Elevation	3.13	ft-NAVD
Bottom of Trench Elevation	-0.87	ft-NAVD
Distance from EL_{inv} and CE (H_2)	3.80	ft
Unsaturated Trench Depth (Du)	2.13	ft
Saturated Trench Depth (Ds)	1.87	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	0.246	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	5.35E-05	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	1,550.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	4.80	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	4.00	ft
Top of Trench Elevation	3.13	ft-NAVD
Bottom of Trench Elevation	-0.87	ft-NAVD
Distance from EL_{inv} and CE (H_2)	3.80	ft
Unsaturated Trench Depth (Du)	2.13	ft
Saturated Trench Depth (Ds)	1.87	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	0.283	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)		3.52E-05	cfs/ft^2-ft
Pavement Section Thickness		1.7	ft
Factor of Safety (FS)		2.0	
Proposed Exfiltration Trench			
Length of Trench for Water Quality (Lwq)		665.0	ft
Additional Length of Trench (Ladd)			ft
Control Elevation (CE)		1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a		ft-NAVD
Lowest Rim Elevation		5.90	ft-NAVD
Trench Width (W)		6.00	ft
Depth of Trench (D)		5.00	ft
Top of Trench Elevation		4.23	ft-NAVD
Bottom of Trench Elevation		-0.77	ft-NAVD
Distance from EL_{inv} and CE (H_2)		4.90	ft
Unsaturated Trench Depth (Du)		3.23	ft
Saturated Trench Depth (Ds)		1.77	ft
Formula Used	Regular		
Volume Provided for Water Quality* (Vwq)		0.141	ac-ft
Additional Volume Provided (Vadd)		0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)		3.31E-04	cfs/ft^2-ft
Pavement Section Thickness		1.7	ft
Factor of Safety (FS)		2.0	
Proposed Exfiltration Trench			
Length of Trench for Water Quality (Lwq)		710.0	ft
Additional Length of Trench (Ladd)			ft
Control Elevation (CE)		1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a		ft-NAVD
Lowest Rim Elevation		5.20	ft-NAVD
Trench Width (W)		6.00	ft
Depth of Trench (D)		5.00	ft
Top of Trench Elevation		3.53	ft-NAVD
Bottom of Trench Elevation		-1.47	ft-NAVD
Distance from EL_{inv} and CE (H_2)		4.20	ft
Unsaturated Trench Depth (Du)		2.53	ft
Saturated Trench Depth (Ds)		2.47	ft
Formula Used	Regular		
Volume Provided for Water Quality* (Vwq)		0.658	ac-ft
Additional Volume Provided (Vadd)		0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)		3.10E-04	cfs/ft^2-ft
Pavement Section Thickness		1.7	ft
Factor of Safety (FS)		2.0	
Proposed Exfiltration Trench			
Length of Trench for Water Quality (Lwq)		700.0	ft
Additional Length of Trench (Ladd)			ft
Control Elevation (CE)		1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a		ft-NAVD
Lowest Rim Elevation		5.80	ft-NAVD
Trench Width (W)		6.00	ft
Depth of Trench (D)		5.00	ft
Top of Trench Elevation		4.13	ft-NAVD
Bottom of Trench Elevation		-0.87	ft-NAVD
Distance from EL_{inv} and CE (H_2)		4.80	ft
Unsaturated Trench Depth (Du)		3.13	ft
Saturated Trench Depth (Ds)		1.87	ft
Formula Used	Regular		
Volume Provided for Water Quality* (Vwq)		0.682	ac-ft
Additional Volume Provided (Vadd)		0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	1.03E-04	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	451.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	7.00	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	6.00	ft
Top of Trench Elevation	5.33	ft-NAVD
Bottom of Trench Elevation	-0.67	ft-NAVD
Distance from EL_{inv} and CE (H_2)	6.00	ft
Unsaturated Trench Depth (Du)	4.33	ft
Saturated Trench Depth (Ds)	1.67	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	0.241	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	1.70E-04	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	1,780.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	8.20	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	7.00	ft
Top of Trench Elevation	6.53	ft-NAVD
Bottom of Trench Elevation	-0.47	ft-NAVD
Distance from EL_{inv} and CE (H_2)	7.20	ft
Unsaturated Trench Depth (Du)	5.53	ft
Saturated Trench Depth (Ds)	1.47	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	1.772	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Basin #1

Exfiltration Trench Inputs

Hydraulic Conductivity (K)	1.70E-04	cfs/ft^2-ft
Pavement Section Thickness	1.7	ft
Factor of Safety (FS)	2.0	
Proposed Exfiltration Trench		
Length of Trench for Water Quality (Lwq)	2,075.0	ft
Additional Length of Trench (Ladd)		ft
Control Elevation (CE)	1.00	ft-NAVD
Lowest Weir/Bleeder Elevations (EL_{inv})	N/a	ft-NAVD
Lowest Rim Elevation	4.80	ft-NAVD
Trench Width (W)	6.00	ft
Depth of Trench (D)	4.00	ft
Top of Trench Elevation	3.13	ft-NAVD
Bottom of Trench Elevation	-0.87	ft-NAVD
Distance from EL_{inv} and CE (H_2)	3.80	ft
Unsaturated Trench Depth (Du)	2.13	ft
Saturated Trench Depth (Ds)	1.87	ft
Formula Used	Regular	
Volume Provided for Water Quality* (Vwq)	0.869	ac-ft
Additional Volume Provided (Vadd)	0.000	ac-ft

**Does not include credit*

Permit Delineated Basin Flood Durations (Hr)

Basin	Existing			Proposed			Future			*Proposed subtracted from Future* Reduction in Flood Time (Hr)		
	10 yr 24 hr	25 yr 72 hr	100 yr 72 hr	10 yr 24 hr	25 yr 72 hr	100 yr 72 hr	10 yr 24 hr	25 yr 72 hr	100 yr 72 hr	10 yr 24 hr	25 yr 72 hr	100 yr 72 hr
B-1	0	0	0	0	0	0	0	0	0	0	0	0
B-2	0	0	0	0	0	0	0	0	0	0	0	0
B-3	2.25	13.5	36	0	18.75	36	0	17.25	36	0	-1.5	0
B-4	0	0	0	0	0	0	0	0	0	0	0	0
B-5	0	0	27.75	0	0	28.75	0	0	27.25	0	0	-1.5
B-6	0	0	0	0	0	0	0	0	0	0	0	0
B-7	0	0	30.25	0	7	31.25	0	0	30.25	0	-7	-1
B-8	0	0	5	0	0	8.5	0	0	0	0	0	-8.5
B-9	4.25	14.75	36	0	18.5	35.75	0	17.25	35.5	0	-1.25	-0.25
B-10	0	0	5.5	0	0	8.75	0	0	1	0	0	-7.75
B-11	0	0	18	0	0	19.25	0	0	17.75	0	0	-1.5
B-12	0	9.5	36	0	16.25	36.25	0	14.75	35.5	0	-1.5	-0.75
B-13	0	0	0	0	0	0	0	0	0	0	0	0
B-14	0	0	0	0	0	0	0	0	0	0	0	0
B-15	0	0	5.75	0	0	8.75	0	0	1.5	0	0	-7.25
B-16	4.25	14.75	36	0	20	36.25	0	18.5	36.25	0	-1.5	0
B-17	10.75	21	36.5	7.75	25	36.25	6.25	23.75	36.25	-1.5	-1.25	0
B-18	6.75	17	36.25	4.25	21.75	36.25	1.25	20.5	36.25	-3	-1.25	0
B-19	12.5	36	36.5	12.5	36	36.5	12.5	36	36.5	0	0	0
B-20	0	29.25	35.75	0	29.25	35.75	0	26.25	35.5	0	-3	-0.25
B-21	0	0	0	0	0	0	0	0	0	0	0	0
B-22	0	0	0	0	0	0	0	0	0	0	0	0
B-23	20.25	62.25	69	20.25	62.25	69	20.25	62.25	69	0	0	0
B-24	16	37.25	40	16	37.25	40	16	37.25	40	0	0	0
B-25	15	36	36.75	15	36	36.75	0	36	36.25	-15	0	-0.5
B-26	16.25	40.25	47.75	16.25	40.25	47.75	16.25	39.5	44.5	0	-0.75	-3.25
B-27	17.75	53.25	62.25	17.75	53.25	62.25	17.75	53.25	62.25	0	0	0
B-28	17.5	51.75	61	17.5	51.75	61	17.5	51.75	61	0	0	0
B-29	16.5	48.25	58.25	16.5	48.25	58.25	15.5	36.5	40.75	-1	-11.75	-17.5
B-30	16.75	49.5	59.75	16.75	49.5	59.75	16.75	49.5	59.75	0	0	0
B-31	13.75	36	36.5	13.75	36	36.5	0	35.75	36.25	-13.75	-0.25	-0.25
B-32	0	20.75	36.25	0	20.75	36.25	0	20	36	0	-0.75	-0.25
B-33	16.25	40.25	47	16.25	40.25	47	16.25	40	46	0	-0.25	-1
B-34	0	21.5	36.25	0	21.5	36.25	0	20.75	36	0	-0.75	-0.25
B-35	17	41.25	46.75	17	41.25	46.75	15.75	36.25	38	-1.25	-5	-8.75
B-36	16	39.25	44.25	16	39.25	44.25	16	39.25	44.25	0	0	0
B-37	16	39.25	44.25	16	39.25	44.25	16	39.25	44	0	0	-0.25
B-38	0.75	2.5	5	0.75	2.5	5	0.75	2.5	5	0	0	0
B-39	0	0	0	0	0	0	0	0	0	0	0	0

Kimley»Horn

Criteria	Basin	**Required Elevation (ft-NAVD)**	Existing Stage (ft-NAVD)	Proposed Stage (ft-NAVD)	Future Stage (ft-NAVD)
Staging of 10-year, 24-hour storm to be below Crown of Roadway	B-1	6.40	4.69	4.65	4.65
	B-2	6.50	4.69	4.65	4.64
	B-3	4.20	5.23	4.49	4.45
	B-4	5.50	5.28	5.28	5.21
	B-5	4.50	4.60	4.50	4.46
	B-6	7.00	4.60	4.50	4.46
	B-7	4.45	4.59	4.49	4.45
	B-8	6.00	5.22	4.49	4.45
	B-9	4.30	4.59	4.49	4.45
	B-10	5.30	4.87	4.49	4.45
	B-11	5.00	4.69	4.65	4.65
	B-12	5.00	4.69	4.65	4.65
	B-13	8.70	6.87	6.87	6.87
	B-14	7.10	4.71	4.54	4.49
	B-15	5.40	4.76	4.49	4.46
	B-16	4.20	4.59	4.50	4.46
	B-17	3.80	4.70	4.49	4.46
	B-18	5.10	4.60	4.51	4.47
	B-19	4.00	5.53	5.53	5.53
	B-20	5.20	4.35	4.35	4.35
	B-21	8.20	4.35	4.35	4.35
	B-22	6.80	6.71	6.71	6.64
	B-23	6.00	6.85	6.85	6.85
	B-24	5.20	6.71	6.71	6.64
	B-25	6.75	6.70	6.70	6.64
	B-26	5.60	6.71	6.71	6.64
	B-27	4.50	6.71	6.71	6.64
	B-28	4.50	6.71	6.71	6.64
	B-29	4.50	6.70	6.70	6.64
	B-30	5.00	6.71	6.71	6.64
	B-31	5.00	6.70	6.70	6.64
	B-32	7.60	6.71	6.71	6.65
	B-33	5.50	6.71	6.71	6.65
	B-34	8.20	6.71	6.71	6.65
	B-35	8.00	7.49	7.49	7.48
	B-36	7.50	8.01	8.01	8.01
	B-37	6.80	8.01	8.01	8.01
	B-38	8.11	8.01	8.01	8.01
	B-39	4.90	4.69	4.65	4.65

Criteria	Basin	**Required Elevation (ft-NAVD)**	Existing Stage (ft-NAVD)	Proposed Stage (ft-NAVD)	Future Stage (ft-NAVD)
Staging of 25-year, 72-hour storm, stages shall be improved upon	B-1	7.40	4.81	4.94	4.91
	B-2	7.50	4.81	4.94	4.91
	B-3	5.20	5.23	4.93	4.90
	B-4	6.50	5.31	5.31	5.21
	B-5	5.50	4.75	4.94	4.91
	B-6	8.00	4.75	4.95	4.92
	B-7	5.45	4.74	4.94	4.91
	B-8	7.00	5.22	4.94	4.90
	B-9	5.30	4.74	4.94	4.90
	B-10	6.30	4.87	4.94	4.91
	B-11	6.00	4.81	4.95	4.91
	B-12	6.00	4.81	4.95	4.91
	B-13	9.70	6.90	6.90	6.90
	B-14	8.10	5.18	5.09	5.13
	B-15	6.40	4.76	4.94	4.91
	B-16	5.20	4.74	4.94	4.91
	B-17	4.80	4.74	4.94	4.91
	B-18	6.10	4.75	4.95	4.92
	B-19	5.00	6.14	6.14	6.14
	B-20	6.20	5.70	5.70	5.65
	B-21	9.20	5.70	5.70	5.65
	B-22	7.80	7.14	7.14	7.13
	B-23	7.00	7.14	7.14	7.13
	B-24	6.20	7.15	7.15	7.13
	B-25	7.75	7.14	7.14	7.13
	B-26	6.60	7.15	7.15	7.13
	B-27	5.50	7.15	7.15	7.14
	B-28	5.50	7.15	7.15	7.14
	B-29	5.50	7.15	7.15	7.14
	B-30	6.00	7.15	7.15	7.13
	B-31	6.00	7.15	7.15	7.14
	B-32	8.60	7.15	7.15	7.14
	B-33	6.50	7.15	7.15	7.13
	B-34	9.20	7.15	7.15	7.14
	B-35	9.00	7.65	7.65	7.65
	B-36	8.50	8.11	8.11	8.11
	B-37	7.80	8.12	8.12	8.12
	B-38	9.11	8.12	8.12	8.12
	B-39	5.90	4.81	4.94	4.91

Criteria	Basin	**Required Elevation (ft-NAVD)**	Existing Stage (ft-NAVD)	Proposed Stage (ft-NAVD)	Future Stage (ft-NAVD)
Staging of 100-year, 72-hour storm to be below FFE and/or improved	B-1	7.40	5.52	5.54	5.53
	B-2	7.50	5.52	5.54	5.53
	B-3	5.20	5.52	5.54	5.52
	B-4	6.50	5.52	5.54	5.53
	B-5	5.50	5.52	5.54	5.53
	B-6	8.00	5.53	5.55	5.53
	B-7	5.45	5.52	5.54	5.53
	B-8	7.00	5.52	5.54	5.52
	B-9	5.30	5.52	5.54	5.52
	B-10	6.30	5.52	5.54	5.53
	B-11	6.00	5.52	5.54	5.53
	B-12	6.00	5.52	5.54	5.53
	B-13	9.70	6.92	6.92	6.92
	B-14	8.10	6.13	6.05	5.71
	B-15	6.40	5.52	5.54	5.53
	B-16	5.20	5.52	5.54	5.53
	B-17	4.80	5.52	5.54	5.53
	B-18	6.10	5.53	5.55	5.54
	B-19	5.00	6.72	6.72	6.72
	B-20	6.20	6.91	6.91	6.88
	B-21	9.20	6.91	6.91	6.88
	B-22	7.80	7.37	7.37	7.36
	B-23	7.00	7.36	7.36	7.35
	B-24	6.20	7.37	7.37	7.36
	B-25	7.75	7.37	7.37	7.36
	B-26	6.60	7.38	7.38	7.36
	B-27	5.50	7.38	7.38	7.37
	B-28	5.50	7.38	7.38	7.37
	B-29	5.50	7.39	7.39	7.37
	B-30	6.00	7.38	7.38	7.37
	B-31	6.00	7.38	7.38	7.37
	B-32	8.60	7.38	7.38	7.37
	B-33	6.50	7.37	7.37	7.36
	B-34	9.20	7.39	7.39	7.37
	B-35	9.00	7.78	7.78	7.78
	B-36	8.50	8.17	8.17	8.17
	B-37	7.80	8.17	8.17	8.17
	B-38	9.11	8.18	8.18	8.18
	B-39	5.90	5.52	5.54	5.53

APPENDIX C – POLLUTANT REDUCTION SUMMARIES

Summary Treatment Report Version: 4.3.5

Project: Infinity Azure
Drainage Improvements

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1)
Exfiltration Trench
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge		
Total N pre load	51.05 kg/yr	
Total N post load	51.05 kg/yr	
Target N load reduction	%	
Target N discharge load	51.05 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	2.65 kg/yr	5.85 lb/yr
Provided N load removed	48.4 kg/yr	106.72 lb/yr

Phosphorus

Surface Water Discharge		
Total P pre load	11.443 kg/yr	
Total P post load	11.443 kg/yr	
Target P load reduction	%	
Target P discharge load	11.443 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.595 kg/yr	1.31 lb/yr
Provided P load removed	10.848 kg/yr	23.92 lb/yr

Summary Treatment Report Version: 4.3.5

Project: Park Road North Part 1

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1)

Multiple BMP

Based on % removal values to the nearest percent

Routing Summary

Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**

Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge		
Total N pre load	28.43 kg/yr	
Total N post load	28.43 kg/yr	
Target N load reduction	%	
Target N discharge load	28.43 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	1.48 kg/yr	3.26 lb/yr
Provided N load removed	26.95 kg/yr	59.43 lb/yr

Phosphorus

Surface Water Discharge		
Total P pre load	6.16 kg/yr	
Total P post load	6.16 kg/yr	
Target P load reduction	%	
Target P discharge load	6.16 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.32 kg/yr	.71 lb/yr
Provided P load removed	5.839 kg/yr	12.876 lb/yr

Summary Treatment Report Version: 4.3.5

Project: Park Road North Part 2

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1)

Exfiltration Trench

Based on % removal values to the nearest percent

Routing Summary

Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**

Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	23.76 kg/yr	
Total N post load	23.76 kg/yr	
Target N load reduction	%	
Target N discharge load	23.76 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	1.24 kg/yr	2.72 lb/yr
Provided N load removed	22.53 kg/yr	49.67 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	3.9 kg/yr	
Total P post load	3.9 kg/yr	
Target P load reduction	%	
Target P discharge load	3.9 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.203 kg/yr	.45 lb/yr
Provided P load removed	3.698 kg/yr	8.153 lb/yr

Summary Treatment Report Version: 4.3.5

Project: Park Road - South

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1)
Exfiltration Trench
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	10.88 kg/yr	
Total N post load	10.88 kg/yr	
Target N load reduction	%	
Target N discharge load	10.88 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	.57 kg/yr	1.25 lb/yr
Provided N load removed	10.32 kg/yr	22.75 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	1.811 kg/yr	
Total P post load	1.811 kg/yr	
Target P load reduction	%	
Target P discharge load	1.811 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.094 kg/yr	.21 lb/yr
Provided P load removed	1.716 kg/yr	3.785 lb/yr

Summary Treatment Report Version: 4.3.5

Project: SW 31st Ave North

Analysis Type: Net Improvement

Date:5/10/2024

BMP Types:

Catchment 1 - (Basin 1)
Exfiltration Trench
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	5.08 kg/yr	
Total N post load	5.08 kg/yr	
Target N load reduction	%	
Target N discharge load	5.08 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	.26 kg/yr	.58 lb/yr
Provided N load removed	4.82 kg/yr	10.63 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	1.102 kg/yr	
Total P post load	1.102 kg/yr	
Target P load reduction	%	
Target P discharge load	1.102 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.057 kg/yr	.13 lb/yr
Provided P load removed	1.044 kg/yr	2.303 lb/yr

Summary Treatment Report Version: 4.3.5

Project: SW 31st Ave South Drainage Improvements

Analysis Type: Net Improvement

Date:5/10/2024

BMP Types:

Catchment 1 - (Basin 1)
Exfiltration Trench
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	5.89 kg/yr	
Total N post load	5.89 kg/yr	
Target N load reduction	%	
Target N discharge load	5.89 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	.31 kg/yr	.68 lb/yr
Provided N load removed	5.59 kg/yr	12.32 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	1.277 kg/yr	
Total P post load	1.277 kg/yr	
Target P load reduction	%	
Target P discharge load	1.277 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.066 kg/yr	.15 lb/yr
Provided P load removed	1.211 kg/yr	2.669 lb/yr

Summary Treatment Report Version: 4.3.5

Project: SW 36th Ct Drainage Improvements

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1)

Multiple BMP

Based on % removal values to the nearest percent

Routing Summary

Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**

Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	9.03 kg/yr	
Total N post load	9.03 kg/yr	
Target N load reduction	%	
Target N discharge load	9.03 kg/yr	
Percent N load reduction	97 %	
Provided N discharge load	.26 kg/yr	.58 lb/yr
Provided N load removed	8.77 kg/yr	19.33 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	1.426 kg/yr	
Total P post load	1.426 kg/yr	
Target P load reduction	%	
Target P discharge load	1.426 kg/yr	
Percent P load reduction	97 %	
Provided P discharge load	.041 kg/yr	.09 lb/yr
Provided P load removed	1.385 kg/yr	3.053 lb/yr

Summary Treatment Report Version: 4.3.5

Project: SW 52nd Ave
Drainage Improvements

Analysis Type: Net Improvement

Date:5/10/2024

BMP Types:

Catchment 1 - (Basin 1)
Multiple BMP
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge		
Total N pre load	67.7 kg/yr	
Total N post load	67.7 kg/yr	
Target N load reduction	%	
Target N discharge load	67.7 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	3.52 kg/yr	7.76 lb/yr
Provided N load removed	64.18 kg/yr	141.51 lb/yr

Phosphorus

Surface Water Discharge		
Total P pre load	15.174 kg/yr	
Total P post load	15.174 kg/yr	
Target P load reduction	%	
Target P discharge load	15.174 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.789 kg/yr	1.74 lb/yr
Provided P load removed	14.385 kg/yr	31.719 lb/yr

Summary Treatment Report Version: 4.3.5

Project: SW 55th Ave Homes

Analysis Type: Net Improvement

Date:5/9/2024

BMP Types:

Catchment 1 - (Basin 1) Exfiltration Trench

Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	62.86 kg/yr	
Total N post load	62.86 kg/yr	
Target N load reduction	%	
Target N discharge load	62.86 kg/yr	
Percent N load reduction	97 %	
Provided N discharge load	2.01 kg/yr	4.44 lb/yr
Provided N load removed	60.85 kg/yr	134.17 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	14.09 kg/yr	
Total P post load	14.09 kg/yr	
Target P load reduction	%	
Target P discharge load	14.09 kg/yr	
Percent P load reduction	97 %	
Provided P discharge load	.451 kg/yr	.99 lb/yr
Provided P load removed	13.639 kg/yr	30.073 lb/yr

APPENDIX D – HYDROLOGIC AND HYDRAULIC MODEL INPUTS

Manual Basin: B-1

Scenario: Existing
Node: B-1
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 21.6480 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.6371	Commerce	Commerce	Soil/Rain		
0.0110	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-10

Scenario: Existing
Node: B-10
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 89.6946 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
89.6896	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		
0.0050	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-11

Scenario: Existing
Node: B-11
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr

Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 61.0257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.1888	Commerce	Commerce	Soil/Rain		
0.0099	Lake	Water	Soil/Rain		
25.8270	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-12

Scenario: Existing
Node: B-12
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 34.5199 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
34.5199	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-13

Scenario: Existing
Node: B-13
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.5566 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.5547	Commerce	Commerce	Soil/Rain		
0.0019	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-14

Scenario: Existing
Node: B-14
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.0794 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.6704	Commerce	Commerce	Soil/Rain		
0.0000	Medium High 25 Residential	Medium High 25 Residential	Soil/Rain		
1.4089	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-15

Scenario: Existing
Node: B-15
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.6139 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.6139	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-16

Scenario: Existing
Node: B-16
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr

Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 15.3168 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.9581	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.3587	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-17

Scenario: Existing
Node: B-17
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.1502 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
13.1502	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-18

Scenario: Existing
Node: B-18
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 40.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.7465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.7465	Commerce	Commerce	Soil/Rain		
0.0000	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-19

Scenario: Existing
Node: B-19
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 46.5822 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.1046	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
1.4776	Lake	Water	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-2

Scenario: Existing
Node: B-2
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 50.6084 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
50.6084	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-20

Scenario: Existing
Node: B-20

Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 191.3347 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0659	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
109.4423	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
81.8265	Lake	Water	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-21

Scenario: Existing
Node: B-21
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.1258 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0385	Transportation	Transportation	Soil/Rain		
13.0769	Transportation	Transportation	Soil/Rain		
0.0028	Commerce	Commerce	Soil/Rain		
0.0076	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-22

Scenario: Existing
Node: B-22
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 26.5697 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.7046	Transportation	Transportation	Soil/Rain		
3.5591	Commerce	Commerce	Soil/Rain		
4.3060	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-23

Scenario: Existing
Node: B-23
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.0465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.4151	Commerce	Commerce	Soil/Rain		
10.5225	Commerce	Commerce	Soil/Rain		
0.1090	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-24

Scenario: Existing
Node: B-24
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 45.9632 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.9160	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0472	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-25

Scenario: Existing
Node: B-25
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.0323 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.0309	Commerce	Commerce	Soil/Rain		
0.0014	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-26

Scenario: Existing
Node: B-26
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 36.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.7984 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7981	Commerce	Commerce	Soil/Rain		
0.0003	Community	Community	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-27

Scenario: Existing
Node: B-27
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.7532 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.7532	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-28

Scenario: Existing
Node: B-28
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.8768 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.8768	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-29

Scenario: Existing
Node: B-29
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9252 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9252	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-3

Scenario: Existing
Node: B-3
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 57.8959 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
27.0678	Commerce	Commerce	Soil/Rain		
30.2166	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.6115	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-30

Scenario: Existing
Node: B-30
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.0533 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0533	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-31

Scenario: Existing
Node: B-31
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.5073 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.7757	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.6309	Lake	Water	Soil/Rain		
0.1007	Commerce	Commerce	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-32

Scenario: Existing
Node: B-32
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 60.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 24.6536 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
14.5636	Commerce	Commerce	Soil/Rain		
0.0331	Community	Community	Soil/Rain		
10.0569	Recreation and Open Space	Recreation and Open Space	Soil/Rain		
0.0000	Community	Community	Soil/Rain		
0.0000	Recreation and Open Space	Recreation and Open Space	Soil/Rain		

Comment:

Manual Basin: B-33

Scenario: Existing
Node: B-33
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.4716 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.4143	Commerce	Commerce	Soil/Rain		
0.0039	Commerce	Commerce	Soil/Rain		
0.0534	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-34

Scenario: Existing
Node: B-34
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.4320 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.3778	Commerce	Commerce	Soil/Rain		

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0542	Community	Community	Soil/Rain		

Comment:

Manual Basin: B-35

Scenario: Existing
Node: B-35
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 18.7257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.6051	Community	Community	Soil/Rain		
0.0468	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0738	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-36

Scenario: Existing
Node: B-36
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 49.5271 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
49.5127	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0143	Community	Community	Soil/Rain		

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-37

Scenario: Existing
Node: B-37
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.1651 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.1650	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0001	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-38

Scenario: Existing
Node: B-38
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 31.1526 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0051	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
31.1475	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-39

Scenario: Existing
Node: B-39
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.2268 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.9159	Transportation	Transportation	Soil/Rain		
0.3110	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-4

Scenario: Existing
Node: B-4
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 35.5623 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.5623	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-40

Scenario: Existing
Node: B-40
Hydrograph Method: NRCS Unit Hydrograph

Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 19.4365 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1153	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
19.3212	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-5

Scenario: Existing
Node: B-5
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 21.7738 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.7738	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-6

Scenario: Existing
Node: B-6
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 60.2765 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
60.2046	Transportation	Transportation	Soil/Rain		
0.0718	Transportation	Transportation	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-7

Scenario: Existing
Node: B-7
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 42.5912 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
37.2826	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
5.3086	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-8

Scenario: Existing
Node: B-8
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.6433 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.6433	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-9

Scenario: Existing
Node: B-9
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9658 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9658	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-1

Scenario: Future
Node: B-1
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 21.6480 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.6371	Commerce	Commerce	Soil/Rain		
0.0110	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-10

Scenario: Future
Node: B-10
Hydrograph Method: NRCS Unit Hydrograph

Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 89.6946 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
89.6896	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		
0.0050	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-11

Scenario: Future
Node: B-11
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 61.0257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.1888	Commerce	Commerce	Soil/Rain		
0.0099	Lake	Water	Soil/Rain		
25.8270	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-12

Scenario: Future
Node: B-12
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 34.5199 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
34.5199	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-13

Scenario: Future
Node: B-13
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.5566 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.5547	Commerce	Commerce	Soil/Rain		
0.0019	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-14

Scenario: Future
Node: B-14
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.0794 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.6704	Commerce	Commerce	Soil/Rain		
0.0000	Medium High 25 Residential	Medium High 25 Residential	Soil/Rain		
1.4089	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-15

Scenario: Future
Node: B-15
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.6139 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.6139	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-16

Scenario: Future
Node: B-16
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 15.3168 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.9581	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.3587	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-17

Scenario: Future
Node: B-17
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256

Peaking Factor: 256.0
Area: 13.1502 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
13.1502	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-18

Scenario: Future
Node: B-18
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 40.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.7465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.7465	Commerce	Commerce	Soil/Rain		
0.0000	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-19

Scenario: Future
Node: B-19
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 46.5822 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.1046	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
1.4776	Lake	Water	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-2

Scenario: Future
Node: B-2
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 50.6084 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
50.6084	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-20

Scenario: Future
Node: B-20
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 191.3347 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0659	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
109.4423	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
81.8265	Lake	Water	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-21

Scenario: Future
Node: B-21
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.1258 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0385	Transportation	Transportation	Soil/Rain		
13.0769	Transportation	Transportation	Soil/Rain		
0.0028	Commerce	Commerce	Soil/Rain		
0.0076	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-22

Scenario: Future
Node: B-22
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 26.5697 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.7046	Transportation	Transportation	Soil/Rain		
3.5591	Commerce	Commerce	Soil/Rain		
4.3060	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-23

Scenario: Future
Node: B-23
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min

Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.0465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.4151	Commerce	Commerce	Soil/Rain		
10.5225	Commerce	Commerce	Soil/Rain		
0.1090	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-24

Scenario: Future
Node: B-24
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 45.9632 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.9160	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0472	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-25

Scenario: Future
Node: B-25
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0

Area: 4.0323 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.0309	Commerce	Commerce	Soil/Rain		
0.0014	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-26

Scenario: Future
Node: B-26
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 36.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.7984 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7981	Commerce	Commerce	Soil/Rain		
0.0003	Community	Community	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-27

Scenario: Future
Node: B-27
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.7532 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.7532	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-28

Scenario: Future
Node: B-28
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.8768 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.8768	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-29

Scenario: Future
Node: B-29
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9252 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9252	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-3

Scenario: Future
Node: B-3
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 57.8959 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
27.0678	Commerce	Commerce	Soil/Rain		
30.2166	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.6115	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-30

Scenario: Future
Node: B-30
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.0533 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0533	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-31

Scenario: Future
Node: B-31
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.5073 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.7757	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.6309	Lake	Water	Soil/Rain		
0.1007	Commerce	Commerce	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-32

Scenario: Future
Node: B-32
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 60.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 24.6536 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
14.5636	Commerce	Commerce	Soil/Rain		
0.0331	Community	Community	Soil/Rain		
10.0569	Recreation and Open Space	Recreation and Open Space	Soil/Rain		
0.0000	Community	Community	Soil/Rain		
0.0000	Recreation and Open Space	Recreation and Open Space	Soil/Rain		

Comment:

Manual Basin: B-33

Scenario: Future
Node: B-33
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.4716 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.4143	Commerce	Commerce	Soil/Rain		
0.0039	Commerce	Commerce	Soil/Rain		
0.0534	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-34

Scenario: Future
Node: B-34
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.4320 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.3778	Commerce	Commerce	Soil/Rain		
0.0542	Community	Community	Soil/Rain		

Comment:

Manual Basin: B-35

Scenario: Future
Node: B-35
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 18.7257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.6051	Community	Community	Soil/Rain		
0.0468	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0738	Medium 16	Medium 16	Soil/Rain		

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
	Residential	Residential			

Comment:

Manual Basin: B-36

Scenario: Future
Node: B-36
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 49.5271 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
49.5127	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0143	Community	Community	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-37

Scenario: Future
Node: B-37
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.1651 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.1650	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0001	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-38

Scenario: Future
Node: B-38
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 31.1526 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0051	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
31.1475	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-39

Scenario: Future
Node: B-39
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.2268 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.9159	Transportation	Transportation	Soil/Rain		
0.3110	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-4

Scenario: Future

Node: B-4
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 35.5623 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.5623	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-40

Scenario: Future
Node: B-40
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 19.4365 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1153	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
19.3212	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-5

Scenario: Future
Node: B-5
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256

Peaking Factor: 256.0
Area: 21.7738 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.7738	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-6

Scenario: Future
Node: B-6
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 60.2765 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
60.2046	Transportation	Transportation	Soil/Rain		
0.0718	Transportation	Transportation	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-7

Scenario: Future
Node: B-7
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 42.5912 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
37.2826	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
5.3086	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-8

Scenario: Future
Node: B-8
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.6433 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.6433	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-9

Scenario: Future
Node: B-9
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9658 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9658	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-1

Scenario: Proposed
Node: B-1

Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 21.6480 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.6371	Commerce	Commerce	Soil/Rain		
0.0110	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-10

Scenario: Proposed
Node: B-10
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 89.6946 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
89.6896	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		
0.0050	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-11

Scenario: Proposed
Node: B-11
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 61.0257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.1888	Commerce	Commerce	Soil/Rain		
0.0099	Lake	Water	Soil/Rain		
25.8270	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-12

Scenario: Proposed
Node: B-12
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 34.5199 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
34.5199	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-13

Scenario: Proposed
Node: B-13
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.5566 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.5547	Commerce	Commerce	Soil/Rain		
0.0019	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-14

Scenario: Proposed
Node: B-14
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.0794 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
10.6704	Commerce	Commerce	Soil/Rain		
0.0000	Medium High 25 Residential	Medium High 25 Residential	Soil/Rain		
1.4089	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-15

Scenario: Proposed
Node: B-15
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 12.6139 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.6139	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-16

Scenario: Proposed
Node: B-16
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr

Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 15.3168 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
12.9581	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.3587	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-17

Scenario: Proposed
Node: B-17
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.1502 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
13.1502	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-18

Scenario: Proposed
Node: B-18
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 40.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.7465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
11.7465	Commerce	Commerce	Soil/Rain		
0.0000	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-19

Scenario: Proposed
Node: B-19
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 13.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 46.5822 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.1046	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
1.4776	Lake	Water	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-2

Scenario: Proposed
Node: B-2
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 50.6084 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
50.6084	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-20

Scenario: Proposed
Node: B-20

Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 191.3347 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0659	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
109.4423	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
81.8265	Lake	Water	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-21

Scenario: Proposed
Node: B-21
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 13.1258 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0385	Transportation	Transportation	Soil/Rain		
13.0769	Transportation	Transportation	Soil/Rain		
0.0028	Commerce	Commerce	Soil/Rain		
0.0076	Lake	Water	Soil/Rain		

Comment:

Manual Basin: B-22

Scenario: Proposed
Node: B-22
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number

Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 26.5697 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.7046	Transportation	Transportation	Soil/Rain		
3.5591	Commerce	Commerce	Soil/Rain		
4.3060	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-23

Scenario: Proposed
Node: B-23
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.0465 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.4151	Commerce	Commerce	Soil/Rain		
10.5225	Commerce	Commerce	Soil/Rain		
0.1090	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-24

Scenario: Proposed
Node: B-24
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 45.9632 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
45.9160	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0472	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
0.0000	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-25

Scenario: Proposed
Node: B-25
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.0323 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.0309	Commerce	Commerce	Soil/Rain		
0.0014	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-26

Scenario: Proposed
Node: B-26
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 36.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 9.7984 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
9.7981	Commerce	Commerce	Soil/Rain		
0.0003	Community	Community	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-27

Scenario: Proposed
Node: B-27
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.7532 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.7532	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-28

Scenario: Proposed
Node: B-28
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.8768 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.8768	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-29

Scenario: Proposed
Node: B-29
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9252 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9252	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-3

Scenario: Proposed
Node: B-3
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 57.8959 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
27.0678	Commerce	Commerce	Soil/Rain		
30.2166	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.6115	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-30

Scenario: Proposed
Node: B-30
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs

Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.0533 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.0533	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-31

Scenario: Proposed
Node: B-31
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 11.5073 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.7757	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
2.6309	Lake	Water	Soil/Rain		
0.1007	Commerce	Commerce	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-32

Scenario: Proposed
Node: B-32
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 60.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 24.6536 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
14.5636	Commerce	Commerce	Soil/Rain		
0.0331	Community	Community	Soil/Rain		
10.0569	Recreation and Open Space	Recreation and Open Space	Soil/Rain		
0.0000	Community	Community	Soil/Rain		
0.0000	Recreation and Open Space	Recreation and Open Space	Soil/Rain		

Comment:

Manual Basin: B-33

Scenario: Proposed
Node: B-33
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 6.4716 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.4143	Commerce	Commerce	Soil/Rain		
0.0039	Commerce	Commerce	Soil/Rain		
0.0534	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-34

Scenario: Proposed
Node: B-34
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.4320 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
7.3778	Commerce	Commerce	Soil/Rain		

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0542	Community	Community	Soil/Rain		

Comment:

Manual Basin: B-35

Scenario: Proposed
Node: B-35
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 18.7257 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
18.6051	Community	Community	Soil/Rain		
0.0468	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0738	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-36

Scenario: Proposed
Node: B-36
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 49.5271 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
49.5127	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0143	Community	Community	Soil/Rain		

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-37

Scenario: Proposed
Node: B-37
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 8.1651 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
8.1650	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
0.0001	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-38

Scenario: Proposed
Node: B-38
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 31.1526 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.0051	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
31.1475	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-39

Scenario: Proposed
Node: B-39
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 7.2268 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
6.9159	Transportation	Transportation	Soil/Rain		
0.3110	Transportation	Transportation	Soil/Rain		

Comment:

Manual Basin: B-4

Scenario: Proposed
Node: B-4
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 35.5623 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
35.5623	Commerce	Commerce	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-40

Scenario: Proposed
Node: B-40
Hydrograph Method: NRCS Unit Hydrograph

Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 19.4365 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
0.1153	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		
19.3212	Low Medium 10 Residential	Low Medium 10 Residential	Soil/Rain		

Comment:

Manual Basin: B-5

Scenario: Proposed
Node: B-5
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 21.7738 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
21.7738	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-6

Scenario: Proposed
Node: B-6
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 60.2765 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient	Reference ET

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
60.2046	Transportation	Transportation	Soil/Rain		
0.0718	Transportation	Transportation	Soil/Rain		
0.0000	Commerce	Commerce	Soil/Rain		

Comment:

Manual Basin: B-7

Scenario: Proposed
Node: B-7
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 42.5912 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
37.2826	Medium 16 Residential	Medium 16 Residential	Soil/Rain		
5.3086	Lake	Water	Soil/Rain		
0.0000	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-8

Scenario: Proposed
Node: B-8
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 4.6433 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
4.6433	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Manual Basin: B-9

Scenario: Proposed
Node: B-9
Hydrograph Method: NRCS Unit Hydrograph
Infiltration Method: Curve Number
Time of Concentration: 10.0000 min
Max Allowable Q: 0.00 cfs
Time Shift: 0.0000 hr
Unit Hydrograph: UH256
Peaking Factor: 256.0
Area: 1.9658 ac

Area [ac]	Land Cover Zone	Soil Zone	Rainfall Name	Crop Coefficient Zone	Reference ET Station
1.9658	Medium 16 Residential	Medium 16 Residential	Soil/Rain		

Comment:

Node: B-1

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.60 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.60	0.0006	25
3.70	0.0024	104
3.80	0.0031	137
3.90	0.0042	183
4.00	0.0058	254
4.10	0.0075	325
4.20	0.0115	500
4.30	0.0172	750
4.40	0.0316	1375
4.50	0.0545	2375
4.60	0.1354	5899
4.70	0.3018	13148
4.80	0.4883	21272
4.90	0.7213	31421
5.00	0.9899	43119
5.10	1.2516	54518
5.20	1.5149	65991

Stage [ft]	Area [ac]	Area [ft2]
5.30	1.8042	78590
5.40	2.0871	90913
5.50	2.3987	104486
5.60	2.7533	119934
5.70	3.1527	137332
5.80	3.6445	158754
5.90	4.0726	177401
6.00	4.4542	194024
6.10	4.8387	210772
6.20	5.2306	227845
6.30	5.6145	244567
6.40	6.1080	266064
6.50	6.6537	289836
6.60	7.2936	317708
6.70	8.0069	348778
6.80	8.7649	381799
6.90	9.5631	416569
7.00	10.3171	449415
7.10	11.1240	484560
7.20	11.9618	521055
7.30	12.7353	554751
7.40	13.5094	588471
7.50	14.1877	618017
7.60	14.7673	643264
7.70	15.2947	666236
7.80	15.8226	689233
7.90	16.3861	713780
8.00	16.9628	738901
8.10	17.5223	763273
8.20	18.0818	787645
8.30	18.6580	812741
8.40	19.2341	837838
8.50	19.7890	862010
8.60	20.3325	885682
8.70	20.7846	905379
8.80	21.1571	921602
8.90	21.3705	930901
9.00	21.5157	937225
9.10	21.5978	940801
9.20	21.5978	940801

Comment:

Node: B-10

Scenario: Existing
Type: Stage/Area

Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0184	800
-1.30	0.0196	852
-1.20	0.0203	883
-1.10	0.0224	975
-1.00	0.0230	1000
-0.90	0.0249	1083
-0.80	0.0266	1158
-0.70	0.0277	1207
-0.60	0.0285	1244
-0.50	0.0302	1315
-0.40	0.0311	1355
-0.30	0.0326	1420
-0.20	0.0359	1565
-0.10	0.0413	1800
0.00	0.0494	2150
0.09	0.0545	2375
0.20	0.0625	2725
0.30	0.0660	2875
0.40	0.0708	3083
0.50	0.0729	3175
0.60	0.0760	3312
0.70	0.0792	3450
0.80	0.0834	3633
0.90	0.0867	3775
0.99	0.0895	3899
1.09	0.0941	4099
1.20	0.1012	4408
1.30	0.1062	4624
1.40	0.1106	4816
1.50	0.1159	5049
1.60	0.1217	5299
1.70	0.1261	5493
1.80	0.1314	5724
1.90	0.1343	5849
2.00	0.1400	6099
2.10	0.1458	6349
2.20	0.1538	6699
2.30	0.1618	7049
2.40	0.1681	7324
2.50	0.1762	7674
2.60	0.1854	8074
2.70	0.1917	8349
2.80	0.2014	8774
2.90	0.2129	9274
3.00	0.2196	9565

Stage [ft]	Area [ac]	Area [ft2]
3.10	0.2304	10036
3.20	0.2381	10374
3.30	0.2479	10799
3.40	0.2663	11598
3.50	0.2863	12473
3.60	0.3162	13773
3.70	0.3483	15173
3.80	0.3954	17223
3.90	0.4470	19472
4.00	0.5050	21997
4.10	0.5779	25172
4.20	0.7282	31721
4.30	0.9486	41319
4.40	1.2716	55393
4.50	1.6590	72265
4.59	2.0549	89513
4.69	2.5243	109960
4.79	3.0511	132907
4.89	3.6772	160179
4.99	4.4163	192374
5.09	5.2897	230419
5.19	6.4810	282312
5.29	8.2025	357302
5.39	10.4847	456714
5.49	13.2650	577823
5.59	16.6685	726078
5.69	20.1775	878933
5.79	23.9161	1041786
5.89	27.6937	1206339
5.99	31.1075	1355044
6.09	33.9590	1479252
6.19	36.3571	1583714
6.29	38.2680	1666952
6.39	39.9046	1738243
6.49	41.5337	1809208
6.59	43.1399	1879174
6.69	44.8040	1951664
6.79	46.2932	2016531
6.89	47.7347	2079322
6.99	49.1067	2139089
7.09	50.4145	2196057
7.19	51.7722	2255199
7.29	53.1483	2315141
7.39	54.5313	2375383
7.49	55.9372	2436625
7.59	57.3443	2497916
7.69	58.8093	2561733
7.79	60.2996	2626649
7.89	61.8369	2693615

Stage [ft]	Area [ac]	Area [ft2]
7.99	63.3283	2758582
8.09	64.9689	2830047
8.19	66.5579	2899263
8.29	68.0063	2962354
8.39	69.3657	3021572
8.49	70.6494	3077489
8.59	71.7633	3126008
8.69	72.7376	3168452
8.79	73.6638	3208797
8.89	74.5108	3245692
8.99	75.3630	3282812
9.09	76.1153	3315582
9.19	76.8624	3348128
9.29	77.6216	3381199
9.39	78.3263	3411894
9.49	79.0918	3445240
9.59	79.8315	3477461
9.69	80.5442	3508506
9.79	81.2965	3541277
9.89	82.0563	3574373
9.99	82.8276	3607968
10.09	83.6843	3645288
10.19	84.6484	3687283
10.29	85.9659	3744675
10.39	87.2536	3800767
10.49	87.7689	3823214
10.59	88.0260	3834413
10.69	88.2165	3842712
10.79	88.3634	3849111
10.89	88.5121	3855585
10.99	88.6383	3861084
11.09	88.8173	3868883
11.19	88.9614	3875158
11.29	89.0526	3879132
11.39	89.1548	3883581
11.49	89.2558	3887981
11.59	89.3459	3891905
11.69	89.4268	3895430
11.79	89.5025	3898729
11.89	89.5559	3901054
11.99	89.5903	3902554
12.09	89.6127	3903529
12.19	89.6270	3904154
12.29	89.6385	3904654
12.39	89.6431	3904854
12.50	89.6444	3904910
12.60	89.6457	3904969
12.70	89.6484	3905083
12.80	89.6488	3905104

Stage [ft]	Area [ac]	Area [ft2]
12.90	89.6530	3905286
13.00	89.6543	3905343
13.09	89.6569	3905453
13.20	89.6589	3905540
13.29	89.6597	3905578
13.40	89.6602	3905600
13.50	89.6615	3905653
13.60	89.6619	3905671
13.70	89.6625	3905697
13.80	89.6635	3905741
13.90	89.6651	3905813
14.00	89.6663	3905863
14.09	89.6672	3905903
14.20	89.6680	3905937
14.29	89.6689	3905978
14.40	89.6706	3906053
14.49	89.6729	3906153
14.60	89.6741	3906203
14.70	89.6759	3906284
14.80	89.6763	3906298
14.90	89.6774	3906347
15.00	89.6779	3906367
15.10	89.6785	3906397
15.20	89.6796	3906444
15.30	89.6816	3906531
15.40	89.6820	3906546
15.50	89.6824	3906566
15.60	89.6831	3906596
15.70	89.6838	3906628
15.80	89.6848	3906669
15.90	89.6861	3906728
16.00	89.6872	3906773
16.10	89.6883	3906823
16.20	89.6894	3906871
16.30	89.6903	3906908
16.39	89.6907	3906928
16.50	89.6909	3906937
16.60	89.6911	3906945
16.70	89.6913	3906953
16.80	89.6916	3906965
16.90	89.6918	3906976
17.00	89.6924	3907001
17.10	89.6927	3907012
17.20	89.6929	3907022
17.30	89.6934	3907043
17.40	89.6942	3907080
17.50	89.6942	3907080

Comment:

Node: B-11

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	19.8875	866300
4.00	23.2501	1012775
4.50	25.9642	1131002
5.00	41.6244	1813161
5.50	53.9220	2348844
6.00	58.6297	2553910
6.50	61.0130	2657725
7.00	61.0130	2657725

Comment:

Node: B-12

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	5.3562	233315
4.00	19.3591	843282
4.50	25.7000	1119494
5.00	29.3028	1276432
5.50	31.4405	1369549
6.00	33.8904	1476267
6.50	34.3276	1495309
7.00	34.4913	1502439
7.50	34.4913	1502439

Comment:

Node: B-13

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.66 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.66	0.0006	25
5.70	0.0008	33
5.80	0.0012	52
5.90	0.0017	76
6.00	0.0020	86
6.10	0.0022	95
6.20	0.0027	116
6.30	0.0030	130
6.40	0.0032	138
6.50	0.0034	146
6.60	0.0038	166
6.69	0.0046	200
6.80	0.0054	233
6.89	0.0063	275
6.99	0.0069	300
7.10	0.0071	311
7.20	0.0074	321
7.30	0.0083	362
7.40	0.0090	393
7.50	0.0096	417
7.59	0.0109	475
7.70	0.0113	491
7.80	0.0119	520
7.90	0.0141	615
8.00	0.0149	650
8.10	0.0160	697
8.20	0.0189	825
8.29	0.0252	1100
8.39	0.0367	1600
8.49	0.0625	2725
8.59	0.1010	4399
8.69	0.1475	6424
8.79	0.1865	8124
8.89	0.2416	10524
8.99	0.2772	12073
9.09	0.3127	13623
9.19	0.3558	15498
9.29	0.3954	17223
9.39	0.4292	18698
9.49	0.4654	20272
9.59	0.5182	22572
9.69	0.5802	25272
9.79	0.6611	28796
9.89	0.7420	32321
9.99	0.8315	36220
10.09	0.9342	40695
10.19	1.0530	45869
10.29	1.2108	52743

Stage [ft]	Area [ac]	Area [ft2]
10.39	1.3394	58342
10.49	1.4794	64441
10.59	1.6400	71440
10.69	1.8036	78565
10.79	1.9901	86688
10.89	2.2018	95912
10.99	2.4211	105461
11.09	2.6948	117384
11.19	2.9955	130483
11.29	3.2617	142081
11.39	3.5435	154354
11.49	3.7713	164278
11.59	3.9383	171552
11.69	4.0617	176926
11.79	4.1650	181426
11.89	4.2533	185275
11.99	4.3239	188350
12.09	4.3911	191274
12.19	4.4484	193774
12.29	4.4840	195324
12.39	4.5173	196774
12.49	4.5305	197349
12.59	4.5437	197924
12.69	4.5489	198149
12.80	4.5525	198306
12.90	4.5540	198374
13.00	4.5540	198374

Comment:

Node: B-14

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.21	0.7816	34045
-0.20	0.7822	34070
-0.10	0.7896	34395
0.00	0.7936	34570
0.10	0.7997	34837
0.20	0.8019	34931
0.30	0.8078	35187
0.40	0.8120	35370

Stage [ft]	Area [ac]	Area [ft2]
0.50	0.8160	35545
0.60	0.8200	35720
0.70	0.8223	35820
0.80	0.8292	36120
0.89	0.8326	36270
1.00	0.8362	36425
1.09	0.8401	36595
1.20	0.8481	36945
1.30	0.8530	37158
1.40	0.8585	37395
1.50	0.8648	37670
1.60	0.8699	37895
1.70	0.8763	38170
1.80	0.8814	38395
1.90	0.8875	38657
2.00	0.8921	38861
2.10	0.8986	39145
2.20	0.9035	39355
2.30	0.9061	39470
2.40	0.9136	39795
2.50	0.9191	40036
2.60	0.9241	40253
2.70	0.9308	40545
2.80	0.9411	40995
2.90	0.9514	41444
3.00	0.9576	41714
3.10	0.9623	41919
3.20	0.9709	42294
3.30	0.9801	42694
3.40	0.9859	42944
3.50	0.9933	43269
3.60	0.9996	43544
3.70	1.0024	43663
3.80	1.0074	43882
3.90	1.0137	44157
4.00	1.0220	44519
4.10	1.0358	45119
4.20	1.0530	45869
4.30	1.0714	46669
4.40	1.0915	47544
4.50	1.1133	48494
4.59	1.1420	49743
4.69	1.1810	51443
4.79	1.2275	53468
4.89	1.2923	56293
4.99	1.3669	59542
5.09	1.4581	63517
5.19	1.5574	67841
5.29	1.6636	72465

Stage [ft]	Area [ac]	Area [ft2]
5.39	1.7887	77915
5.49	1.9379	84414
5.59	2.1095	91888
5.69	2.3040	100362
5.79	2.5163	109610
5.89	2.7659	120484
5.99	3.0483	132782
6.09	3.3065	144031
6.19	3.5969	156679
6.29	3.8614	168203
6.39	4.1007	178626
6.49	4.3383	188975
6.59	4.5730	199198
6.69	4.8094	209497
6.79	5.0734	220995
6.89	5.3763	234194
6.99	5.6679	246892
7.09	6.0225	262340
7.19	6.3203	275313
7.29	6.6118	288012
7.39	6.9051	300785
7.49	7.2058	313883
7.59	7.5065	326981
7.69	7.7991	339730
7.79	8.1159	353528
7.89	8.4309	367251
7.99	8.7615	381649
8.09	9.0931	396097
8.19	9.3519	407371
8.29	9.6194	419019
8.39	9.8581	429418
8.49	10.1186	440766
8.59	10.4313	454389
8.69	10.6712	464838
8.79	10.8371	472062
8.89	10.9530	477111
8.99	11.0637	481936
9.09	11.1716	486635
9.19	11.2984	492159
9.29	11.4367	498183
9.39	11.5475	503008
9.49	11.6152	505957
9.59	11.6927	509332
9.69	11.7598	512257
9.79	11.8332	515456
9.89	11.8860	517756
9.99	11.9406	520131
10.09	11.9945	522480
10.19	12.0318	524105

Stage [ft]	Area [ac]	Area [ft2]
10.29	12.0593	525305
10.39	12.0731	525905
10.50	12.0770	526074
10.60	12.0792	526169
10.70	12.0792	526169

Comment:

Node: B-15

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.87	0.0006	25
1.90	0.0006	28
2.00	0.0009	39
2.10	0.0011	49
2.20	0.0021	90
2.30	0.0025	110
2.40	0.0031	135
2.50	0.0039	172
2.60	0.0062	271
2.70	0.0092	400
2.80	0.0207	900
2.90	0.0304	1325
3.00	0.0574	2500
3.10	0.1211	5274
3.20	0.1767	7699
3.30	0.2416	10524
3.40	0.3300	14373
3.50	0.4361	18997
3.60	0.5601	24397
3.70	0.6886	29996
3.80	0.8206	35745
3.90	0.9859	42944
4.00	1.1431	49793
4.10	1.3256	57742
4.20	1.5706	68416
4.30	1.8375	80039
4.40	2.1663	94362
4.50	2.4635	107311
4.59	2.7470	119659
4.69	3.1229	136032

Stage [ft]	Area [ac]	Area [ft2]
4.79	3.5355	154004
4.89	3.9985	174177
4.99	4.5994	200348
5.09	5.2036	226670
5.19	5.8567	255116
5.29	6.5229	284137
5.39	7.1381	310934
5.49	7.7125	335955
5.59	8.1911	356802
5.69	8.6519	376875
5.79	9.0679	394997
5.89	9.4656	412320
5.99	9.7927	426568
6.09	10.0469	437642
6.19	10.2500	446490
6.29	10.4319	454414
6.39	10.6259	462863
6.49	10.7952	470237
6.59	10.9610	477461
6.69	11.1263	484660
6.79	11.2904	491809
6.89	11.4643	499383
6.99	11.6158	505982
7.09	11.7638	512432
7.19	11.8975	518256
7.29	12.0381	524380
7.39	12.1385	528754
7.49	12.2252	532529
7.59	12.2940	535528
7.69	12.3474	537853
7.79	12.3910	539753
7.89	12.4323	541553
7.99	12.4708	543227
8.09	12.4995	544477
8.19	12.5236	545527
8.29	12.5465	546527
8.39	12.5683	547477
8.49	12.5781	547902
8.59	12.5884	548352
8.69	12.5924	548527
8.80	12.5976	548752
8.89	12.6022	548952
9.00	12.6051	549077
9.10	12.6062	549127
9.20	12.6068	549152
9.30	12.6139	549462
9.40	12.6139	549462

Comment:

Node: B-16

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.28	2.2426	97687
-0.20	2.2489	97962
-0.10	2.2564	98287
0.00	2.2638	98612
0.10	2.2741	99062
0.20	2.2799	99312
0.30	2.2856	99562
0.40	2.2931	99887
0.50	2.3009	100228
0.60	2.3109	100662
0.70	2.3180	100974
0.80	2.3252	101286
0.89	2.3350	101711
0.99	2.3419	102011
1.09	2.3499	102361
1.20	2.3614	102861
1.30	2.3717	103311
1.40	2.3780	103586
1.50	2.3901	104111
1.60	2.4021	104636
1.70	2.4159	105236
1.80	2.4291	105811
1.90	2.4492	106686
2.00	2.4675	107486
2.10	2.4847	108236
2.20	2.5134	109485
2.30	2.5519	111160
2.40	2.5944	113010
2.50	2.6420	115085
2.60	2.7051	117834
2.70	2.7831	121234
2.80	2.8732	125158
2.90	2.9381	127983
3.00	3.0356	132232
3.10	3.1412	136832
3.20	3.2359	140956
3.30	3.3363	145331
3.40	3.4505	150305
3.50	3.5619	155154
3.60	3.7088	161553
3.70	3.8723	168677
3.80	4.0777	177626

Stage [ft]	Area [ac]	Area [ft2]
3.90	4.3394	189025
4.00	4.7072	205048
4.10	5.1520	224420
4.20	5.7235	249317
4.30	6.5034	283287
4.40	7.4577	324857
4.50	8.5227	371250
4.59	9.3824	408695
4.69	10.2213	445241
4.79	10.8979	474712
4.89	11.4052	496809
4.99	11.8028	514131
5.09	12.1644	529879
5.19	12.5253	545602
5.29	12.9264	563075
5.39	13.2874	578798
5.49	13.5737	591271
5.59	13.7493	598920
5.69	13.8847	604819
5.79	14.0047	610044
5.89	14.1177	614968
5.99	14.2365	620142
6.09	14.3507	625117
6.19	14.4729	630441
6.29	14.6112	636465
6.39	14.7771	643689
6.49	14.9102	649488
6.59	15.0296	654688
6.69	15.1334	659212
6.79	15.1839	661412
6.89	15.2097	662537
6.99	15.2402	663861
7.09	15.2826	665711
7.19	15.3166	667189
7.29	15.3166	667189

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-17

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.73	0.0006	25
2.80	0.0016	69
2.90	0.0063	275
3.00	0.0212	925
3.10	0.0620	2700
3.20	0.1211	5274
3.30	0.2416	10524
3.40	0.4310	18772
3.50	0.6295	27421
3.60	0.8757	38145
3.70	1.1661	50793
3.80	1.4547	63367
3.90	1.7370	75665
4.00	2.0165	87838
4.10	2.3080	100537
4.20	2.5886	112760
4.30	2.8583	124508
4.39	3.0632	133432
4.49	3.2675	142331
4.59	3.5056	152705
4.69	3.8086	165903
4.79	4.1300	179901
4.89	4.4989	195974
4.99	4.9345	214946
5.09	5.4693	238243
5.19	6.0179	262140
5.29	6.6480	289586
5.39	7.2786	317058
5.49	7.7963	339605
5.59	8.2461	359202
5.69	8.5985	374550
5.79	8.9606	390323
5.89	9.2860	404496
5.99	9.5689	416819
6.09	9.8150	427543
6.19	10.0802	439091
6.29	10.3418	450490
6.39	10.5995	461713
6.49	10.8675	473387
6.59	11.1532	485835
6.69	11.4247	497659
6.79	11.7225	510632
6.89	11.9796	521830
6.99	12.2177	532204
7.09	12.4025	540253
7.19	12.5477	546577
7.29	12.6762	552176
7.39	12.7910	557176
7.49	12.8885	561425

Stage [ft]	Area [ac]	Area [ft2]
7.59	12.9586	564475
7.69	13.0171	567024
7.79	13.0727	569449
7.89	13.1152	571299
7.99	13.1428	572499
8.09	13.1500	572814
8.19	13.1500	572814

Comment:

Node: B-18

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.46	0.0006	25
1.50	0.0007	31
1.60	0.0011	47
1.70	0.0016	70
1.80	0.0022	95
1.90	0.0032	141
2.00	0.0060	262
2.10	0.0086	375
2.20	0.0143	625
2.30	0.0186	808
2.40	0.0281	1225
2.50	0.0482	2100
2.60	0.0712	3100
2.70	0.1010	4399
2.80	0.1274	5549
2.90	0.1526	6649
3.00	0.1848	8049
3.10	0.2221	9674
3.20	0.2571	11198
3.30	0.3007	13098
3.40	0.3437	14973
3.50	0.3879	16898
3.60	0.4344	18922
3.70	0.4763	20747
3.80	0.5348	23297
3.90	0.6048	26346
4.00	0.6955	30296
4.10	0.8298	36145

Stage [ft]	Area [ac]	Area [ft2]
4.20	1.0157	44244
4.30	1.2584	54818
4.40	1.5322	66741
4.50	1.7904	77990
4.59	2.0079	87463
4.69	2.2139	96437
4.79	2.4583	107086
4.89	2.7034	117759
4.99	2.9937	130408
5.09	3.3294	145031
5.19	3.6709	159904
5.29	4.0967	178451
5.39	4.5621	198723
5.49	5.1107	222620
5.59	5.4825	238818
5.69	5.7671	251216
5.79	5.9605	259640
5.89	6.1178	266489
5.99	6.2601	272689
6.09	6.4271	279963
6.19	6.5240	284187
6.29	6.6199	288361
6.39	6.7163	292561
6.49	6.8414	298010
6.59	7.1174	310034
6.69	7.2867	317408
6.79	7.3848	321682
6.89	7.4554	324757
6.99	7.5340	328181
7.09	7.6103	331506
7.19	7.6861	334805
7.29	7.7590	337980
7.39	7.8238	340805
7.49	7.8927	343804
7.59	7.9696	347154
7.69	8.0464	350503
7.79	8.1268	354003
7.89	8.2232	358202
7.99	8.2995	361527
8.09	8.3632	364301
8.19	8.4367	367501
8.29	8.5107	370725
8.39	8.6140	375225
8.49	8.7155	379649
8.59	8.7959	383149
8.69	8.8797	386798
8.79	8.9612	390348
8.89	9.0415	393847
8.99	9.1195	397247

Stage [ft]	Area [ac]	Area [ft2]
9.09	9.1964	400596
9.19	9.2785	404171
9.29	9.3606	407746
9.39	9.4386	411145
9.49	9.5252	414920
9.59	9.6234	419194
9.69	9.7169	423268
9.79	9.8162	427593
9.89	9.8977	431142
9.99	9.9780	434642
10.09	10.0515	437842
10.19	10.1393	441666
10.29	10.2265	445466
10.39	10.3315	450040
10.49	10.4422	454864
10.59	10.5519	459639
10.69	10.6563	464188
10.79	10.7447	468038
10.89	10.8204	471337
10.99	10.8853	474162
11.09	10.9501	476986
11.19	11.0333	480611
11.29	11.1372	485135
11.39	11.2255	488985
11.49	11.2944	491984
11.59	11.3661	495109
11.69	11.4350	498108
11.79	11.4884	500433
11.89	11.5257	502058
11.99	11.5589	503508
12.09	11.5968	505158
12.19	11.6427	507157
12.29	11.6760	508607
12.39	11.7179	510432
12.49	11.7451	511618
12.59	11.7451	511618

Comment:

Node: B-19

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.20	0.4700	20472
0.30	1.2092	52673
0.40	1.3999	60979
0.50	1.4094	61392
0.60	1.4208	61892
0.70	1.4306	62317
0.80	1.4426	62842
0.90	1.4593	63566
1.00	1.4756	64279
1.10	1.4845	64666
1.20	1.4926	65016
1.30	1.5055	65579
1.40	1.5132	65916
1.50	1.5270	66516
1.60	1.5385	67016
1.70	1.5482	67441
1.80	1.5577	67853
1.90	1.5741	68566
2.00	1.5878	69166
2.10	1.6016	69766
2.20	1.6154	70366
2.30	1.6309	71041
2.40	1.6458	71690
2.50	1.6607	72340
2.60	1.6785	73115
2.70	1.7049	74265
2.80	1.7296	75340
2.90	1.7623	76765
3.00	1.8105	78864
3.10	1.8857	82139
3.20	1.9689	85764
3.30	2.0567	89588
3.40	2.1869	95262
3.50	2.3103	100637
3.60	2.4698	107586
3.70	2.6339	114735
3.80	2.8359	123534
3.90	3.0683	133657
4.00	3.3834	147380
4.10	3.7300	162478
4.20	4.1942	182701
4.30	4.7859	208472
4.40	5.5927	243617
4.50	6.6049	287712
4.60	7.7096	335830
4.70	8.9640	390473
4.80	10.2730	447490
4.90	11.6674	508232
5.00	13.2093	575398

Stage [ft]	Area [ac]	Area [ft2]
5.10	14.8126	645239
5.20	16.5416	720554
5.30	18.2936	796869
5.40	19.9640	869634
5.50	21.4497	934350
5.60	22.7822	992393
5.70	23.8977	1040986
5.80	24.9031	1084780
5.90	25.8305	1125175
6.00	26.5960	1158520
6.10	27.3006	1189216
6.20	27.9571	1217812
6.30	28.5694	1244484
6.40	29.1783	1271005
6.50	29.7458	1295727
6.60	30.3575	1322373
6.70	30.9555	1348420
6.80	31.6424	1378341
6.90	32.3166	1407712
7.00	33.0242	1438533
7.10	33.7392	1469679
7.20	34.3997	1498450
7.30	35.0607	1527246
7.40	35.7287	1556342
7.50	36.3863	1584988
7.60	37.0003	1611735
7.70	37.5868	1637281
7.80	38.1670	1662553
7.90	38.7448	1687725
8.00	39.2825	1711147
8.10	39.7617	1732019
8.20	40.1817	1750316
8.30	40.5869	1767964
8.40	40.9828	1785212
8.50	41.3753	1802309
8.60	41.8350	1822332
8.70	42.3377	1844229
8.80	42.7778	1863401
8.90	43.1749	1880699
9.00	43.4899	1894422
9.10	43.7413	1905371
9.20	43.9381	1913944
9.30	44.1212	1921918
9.40	44.3134	1930292
9.50	44.4942	1938166
9.60	44.6583	1945315
9.70	44.8253	1952589
9.80	44.9664	1958738
9.90	45.0893	1964088

Stage [ft]	Area [ac]	Area [ft2]
10.00	45.1989	1968862
10.10	45.3033	1973411
10.20	45.3756	1976561
10.30	45.4502	1979811
10.40	45.5334	1983435
10.50	45.6201	1987210
10.60	45.7136	1991284
10.70	45.7985	1994984
10.80	45.8892	1998933
10.90	45.9603	2002033
11.00	46.0464	2005782
11.10	46.1623	2010831
11.20	46.2513	2014706
11.30	46.3316	2018205
11.40	46.4183	2021980
11.50	46.5032	2025680
11.60	46.5835	2029179
11.70	46.5865	2029310
11.80	46.5865	2029310

Comment:

Node: B-2

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.66	0.0006	25
1.70	0.0014	59
1.80	0.0025	108
1.90	0.0092	400
2.00	0.0252	1100
2.10	0.0666	2900
2.20	0.1262	5499
2.30	0.2146	9349
2.40	0.3168	13798
2.50	0.4281	18648
2.60	0.5130	22347
2.70	0.5985	26072
2.80	0.7064	30771
2.90	0.8906	38795
3.00	1.2825	55868
3.10	1.7944	78165

Stage [ft]	Area [ac]	Area [ft2]
3.20	2.3780	103586
3.30	2.9955	130483
3.40	3.5515	154704
3.50	3.9222	170852
3.60	4.1317	179976
3.70	4.2975	187200
3.80	4.4249	192749
3.90	4.5276	197224
4.00	4.6447	202323
4.10	4.7354	206272
4.20	4.8335	210547
4.30	4.9729	216621
4.40	5.1761	225470
4.50	5.4263	236368
4.59	5.6977	248192
4.69	6.0609	264015
4.79	6.4799	282262
4.89	6.9332	302010
4.99	7.4439	324257
5.09	7.9850	347829
5.19	8.6128	375175
5.29	9.4311	410820
5.39	10.2523	446590
5.49	11.2278	489085
5.59	12.9104	562375
5.69	14.6583	638515
5.79	15.9070	692907
5.89	17.0443	742451
5.99	18.2689	795794
6.09	19.3495	842862
6.19	20.4788	892056
6.29	20.9861	914153
6.39	21.4532	934500
6.49	21.9719	957097
6.59	22.5573	982594
6.69	23.2149	1011240
6.79	23.9356	1042636
6.89	24.7074	1076256
6.99	25.5590	1113351
7.09	26.5357	1155896
7.19	27.5577	1200415
7.29	28.6153	1246484
7.39	29.7888	1297602
7.49	31.0111	1350845
7.59	32.0521	1396189
7.69	32.9783	1436533
7.79	33.8006	1472353
7.89	34.5391	1504524
7.99	35.2817	1536870

Stage [ft]	Area [ac]	Area [ft2]
8.09	35.9990	1568116
8.19	36.6675	1597237
8.29	37.2941	1624533
8.39	37.9254	1652029
8.49	38.5870	1680851
8.59	39.1402	1704947
8.69	39.6871	1728769
8.79	40.1450	1748717
8.89	40.5473	1766239
8.99	40.8950	1781387
9.09	41.1986	1794610
9.19	41.4339	1804859
9.29	41.6605	1814733
9.39	41.8832	1824431
9.49	42.0898	1833430
9.59	42.3107	1843054
9.69	42.5523	1853577
9.79	42.8381	1866026
9.89	43.1221	1878399
9.99	43.4481	1892597
10.09	43.7637	1906345
10.19	44.0179	1917419
10.29	44.2658	1928218
10.39	44.4993	1938391
10.49	44.6973	1947015
10.59	44.8982	1955764
10.69	45.1053	1964788
10.79	45.2924	1972937
10.89	45.4634	1980386
10.99	45.6401	1988085
11.09	45.8002	1995059
11.19	45.9718	2002533
11.29	46.1359	2009682
11.39	46.3121	2017356
11.49	46.4831	2024805
11.59	46.6449	2031854
11.69	46.8091	2039003
11.79	46.9629	2045702
11.89	47.1321	2053076
11.99	47.3100	2060825
12.09	47.4896	2068649
12.19	47.6790	2076898
12.29	47.8512	2084397
12.39	48.0113	2091371
12.49	48.1593	2097820
12.59	48.2712	2102694
12.69	48.4043	2108493
12.79	48.6058	2117267
12.89	48.7412	2123166

Stage [ft]	Area [ac]	Area [ft2]
12.99	48.8525	2128016
13.09	48.9352	2131615
13.19	48.9891	2133965
13.29	49.0390	2136140
13.39	49.0763	2137765
13.49	49.1176	2139564
13.59	49.1567	2141264
13.69	49.1894	2142689
13.79	49.2152	2143814
13.89	49.2445	2145089
13.99	49.2829	2146763
14.09	49.3208	2148413
14.19	49.3558	2149938
14.29	49.3982	2151788
14.39	49.4350	2153387
14.49	49.4769	2155212
14.59	49.5199	2157087
14.69	49.5647	2159037
14.79	49.6140	2161186
14.89	49.6875	2164386
14.99	49.8022	2169385
15.09	49.9118	2174160
15.19	50.0450	2179959
15.29	50.2011	2186758
15.39	50.3577	2193582
15.49	50.4685	2198406
15.59	50.5706	2202856
15.69	50.5792	2203230
15.79	50.5792	2203230

Comment:

Node: B-20

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	81.0865	3532128
-0.30	81.1043	3532903
-0.20	81.1456	3534703
-0.10	81.1927	3536753
0.00	81.2529	3539377
0.09	81.2942	3541177

Stage [ft]	Area [ac]	Area [ft2]
0.20	81.3459	3543427
0.30	81.3947	3545552
0.40	81.4366	3547376
0.50	81.4893	3549676
0.60	81.5358	3551701
0.70	81.5909	3554100
0.80	81.6489	3556625
0.89	81.7005	3558875
0.99	81.7596	3561449
1.09	81.8268	3564374
1.20	81.8928	3567249
1.30	81.9576	3570073
1.40	82.0225	3572898
1.50	82.0833	3575548
1.60	82.1435	3578172
1.70	82.2095	3581047
1.80	82.2772	3583996
1.90	82.3518	3587246
2.00	82.4379	3590995
2.10	82.5355	3595245
2.20	82.6307	3599394
2.30	82.7380	3604069
2.40	82.8408	3608543
2.50	82.9607	3613767
2.60	83.0755	3618767
2.70	83.2034	3624341
2.80	83.3274	3629740
2.90	83.4605	3635540
3.00	83.5925	3641289
3.10	83.7296	3647263
3.20	83.8565	3652787
3.30	83.9816	3658236
3.40	84.1124	3663936
3.50	84.2576	3670260
3.60	84.4045	3676659
3.70	84.5525	3683108
3.80	84.7069	3689832
3.90	84.8888	3697756
4.00	85.0661	3705480
4.10	85.2561	3713754
4.20	85.4540	3722378
4.30	85.6578	3731252
4.40	85.8902	3741375
4.50	86.1742	3753749
4.59	86.4795	3767047
4.69	86.8806	3784520
4.79	87.3517	3805042
4.89	87.9267	3830089
4.99	88.6722	3862559

Stage [ft]	Area [ac]	Area [ft2]
5.09	89.7935	3911403
5.19	91.3761	3980343
5.29	93.6744	4080455
5.39	96.5694	4206563
5.49	100.0337	4357468
5.59	104.2853	4542668
5.69	109.4511	4767688
5.79	115.8087	5044626
5.89	123.0013	5357935
5.99	130.1634	5669918
6.09	136.9451	5965328
6.19	143.2993	6242116
6.29	149.3528	6505806
6.39	154.8886	6746949
6.49	159.8621	6963595
6.59	164.3726	7160069
6.69	168.1272	7323622
6.79	171.3012	7461879
6.89	173.9678	7578038
6.99	176.4463	7685999
7.09	178.6842	7783486
7.19	180.4551	7860625
7.29	181.9620	7926267
7.39	183.2090	7980584
7.49	184.2953	8027903
7.59	185.2370	8068923
7.69	186.0668	8105068
7.79	186.7502	8134839
7.89	187.3768	8162135
7.99	187.8566	8183032
8.09	188.2129	8198555
8.19	188.4729	8209879
8.29	188.6864	8219177
8.39	188.8671	8227051
8.49	189.0014	8232901
8.59	189.0984	8237125
8.69	189.1770	8240550
8.79	189.2608	8244199
8.89	189.3210	8246824
8.99	189.3939	8249998
9.09	189.4794	8253723
9.19	189.5454	8256597
9.29	189.6194	8259822
9.39	189.7003	8263347
9.49	189.7457	8265321
9.59	189.7916	8267321
9.69	189.8495	8269846
9.79	189.9132	8272620
9.89	189.9695	8275070

Stage [ft]	Area [ac]	Area [ft2]
9.99	190.0211	8277320
10.09	190.0693	8279419
10.19	190.1187	8281569
10.29	190.1738	8283969
10.39	190.2277	8286319
10.49	190.3166	8290193
10.59	190.3976	8293718
10.69	190.4871	8297617
10.79	190.5680	8301142
10.89	190.6311	8303891
10.99	190.6983	8306816
11.09	190.7654	8309740
11.19	190.8429	8313115
11.29	190.9094	8316015
11.39	190.9892	8319489
11.49	191.0690	8322964
11.59	191.1533	8326638
11.69	191.2526	8330963
11.79	191.2583	8331212
11.89	191.2583	8331212

Comment:

Node: B-21

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	0.0011	50
-0.30	0.0015	67
-0.20	0.0020	88
-0.10	0.0024	103
0.00	0.0026	115
0.09	0.0029	125
0.20	0.0037	161
0.30	0.0044	191
0.40	0.0047	203
0.50	0.0048	207
0.60	0.0048	211
0.70	0.0049	215
0.80	0.0050	220
0.90	0.0051	224
1.00	0.0059	256

Stage [ft]	Area [ac]	Area [ft2]
1.10	0.0064	280
1.20	0.0068	295
1.30	0.0075	327
1.40	0.0077	335
1.50	0.0079	343
1.60	0.0080	351
1.70	0.0082	357
1.80	0.0083	363
1.90	0.0085	369
2.00	0.0086	375
2.10	0.0089	390
2.20	0.0093	404
2.30	0.0096	419
2.40	0.0108	471
2.50	0.0113	494
2.60	0.0121	527
2.70	0.0122	530
2.80	0.0123	534
2.90	0.0123	537
3.00	0.0124	541
3.10	0.0125	544
3.20	0.0126	548
3.30	0.0128	557
3.40	0.0132	575
3.50	0.0141	615
3.60	0.0147	640
3.70	0.0151	658
3.80	0.0154	672
3.90	0.0156	679
4.00	0.0157	684
4.10	0.0158	689
4.20	0.0159	694
4.30	0.0160	699
4.40	0.0165	717
4.50	0.0179	779
4.60	0.0186	809
4.69	0.0189	825
4.80	0.0194	843
4.90	0.0202	880
5.00	0.0204	889
5.10	0.0206	899
5.20	0.0216	941
5.29	0.0224	975
5.40	0.0231	1007
5.50	0.0238	1037
5.60	0.0247	1075
5.70	0.0275	1200
5.79	0.0310	1350
5.89	0.0367	1600

Stage [ft]	Area [ac]	Area [ft2]
5.99	0.0494	2150
6.09	0.0723	3150
6.19	0.0935	4074
6.29	0.1096	4774
6.39	0.1412	6149
6.49	0.1676	7299
6.59	0.2135	9299
6.69	0.2749	11973
6.79	0.3294	14348
6.89	0.4017	17498
6.99	0.4889	21297
7.09	0.6220	27096
7.19	0.7649	33321
7.29	0.9313	40570
7.39	1.1425	49768
7.49	1.4076	61317
7.59	1.7783	77465
7.69	2.2655	98687
7.79	2.7998	121959
7.89	3.2416	141206
7.99	3.6244	157879
8.09	4.0204	175127
8.19	4.6309	201723
8.29	5.0607	220446
8.39	5.5112	240068
8.49	5.9238	258041
8.59	6.3226	275413
8.69	6.7696	294886
8.79	7.2017	313708
8.89	7.6511	333280
8.99	8.1830	356452
9.09	8.7626	381699
9.19	9.3927	409145
9.29	9.9987	435542
9.39	10.5421	459214
9.49	11.0207	480061
9.59	11.4189	497409
9.69	11.7185	510457
9.79	11.9606	521005
9.89	12.1322	528479
9.99	12.2740	534654
10.09	12.4352	541678
10.19	12.5890	548377
10.29	12.7302	554526
10.39	12.8524	559850
10.49	12.9413	563725
10.59	13.0027	566399
10.69	13.0498	568449
10.79	13.0762	569599

Stage [ft]	Area [ac]	Area [ft2]
10.89	13.0871	570074
10.99	13.0916	570268
11.09	13.0916	570268

Comment:

Node: B-22

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.26 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.26	0.0006	25
3.30	0.0023	100
3.40	0.0043	187
3.50	0.0103	450
3.60	0.0241	1050
3.70	0.0637	2775
3.80	0.0987	4299
3.90	0.1199	5224
4.00	0.1475	6424
4.10	0.1716	7474
4.20	0.1934	8424
4.30	0.2117	9224
4.39	0.2267	9874
4.50	0.2389	10407
4.60	0.2445	10649
4.69	0.2525	10999
4.79	0.2617	11398
4.89	0.2686	11698
4.99	0.2732	11898
5.09	0.2800	12198
5.19	0.2875	12523
5.29	0.2944	12823
5.39	0.3036	13223
5.49	0.3214	13998
5.59	0.3449	15023
5.69	0.3873	16873
5.79	0.4660	20297
5.89	0.6031	26271
5.99	0.8355	36395
6.09	1.1936	51993
6.19	1.6429	71565
6.29	2.2064	96112

Stage [ft]	Area [ac]	Area [ft2]
6.39	2.8859	125708
6.49	3.7088	161553
6.59	4.6418	202198
6.69	5.5531	241893
6.79	6.3903	278363
6.89	7.1845	312958
6.99	7.8674	342704
7.09	8.4533	368226
7.19	9.0042	392223
7.29	9.4902	413395
7.39	9.9723	434392
7.49	10.4222	453989
7.59	10.8204	471337
7.69	11.1859	487260
7.79	11.5647	503758
7.89	11.9572	520855
7.99	12.3618	538478
8.09	12.8048	557776
8.19	13.2604	577623
8.29	13.7401	598520
8.39	14.2549	620942
8.49	14.8270	645864
8.59	15.4003	670835
8.69	16.0097	697382
8.79	16.6369	724703
8.89	17.2939	753324
8.99	18.0422	785920
9.09	18.7550	816966
9.19	19.4533	847387
9.29	20.1368	877158
9.39	20.7617	904379
9.49	21.3459	929826
9.59	21.9335	955422
9.69	22.5727	983269
9.79	23.1621	1008940
9.89	23.7331	1033812
9.99	24.2122	1054684
10.09	24.6558	1074007
10.19	25.0431	1090879
10.29	25.3897	1105977
10.39	25.6744	1118376
10.49	25.9160	1128899
10.59	26.0910	1136523
10.69	26.2321	1142672
10.79	26.3102	1146072
10.89	26.3825	1149222
10.99	26.4382	1151646
11.09	26.4829	1153596
11.19	26.5133	1154921

Stage [ft]	Area [ac]	Area [ft2]
11.29	26.5278	1155551
11.39	26.5278	1155551

Comment:

Node: B-23

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.01 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.01	0.0006	25
5.10	0.0026	112
5.20	0.0132	575
5.30	0.0390	1700
5.40	0.0666	2900
5.49	0.0970	4224
5.59	0.1360	5924
5.69	0.2026	8824
5.79	0.2932	12773
5.89	0.3845	16748
5.99	0.5021	21872
6.09	0.6840	29796
6.19	0.9675	42144
6.29	1.3009	56667
6.39	1.7313	75415
6.49	2.1295	92763
6.59	2.5111	109385
6.69	2.8755	125258
6.79	3.2032	139531
6.89	3.5091	152855
6.99	3.8379	167178
7.09	4.1988	182901
7.19	4.6298	201673
7.29	5.0854	221520
7.39	5.5284	240818
7.49	5.9479	259090
7.59	6.3358	275988
7.69	6.7077	292186
7.79	7.0824	308509
7.89	7.5013	326756
7.99	7.8554	342179
8.09	8.1905	356777
8.19	8.4619	368601

Stage [ft]	Area [ac]	Area [ft2]
8.29	8.7276	380174
8.39	8.9468	389723
8.49	9.1700	399447
8.59	9.3732	408295
8.69	9.5838	417469
8.79	9.8546	429268
8.89	10.0859	439341
8.99	10.2626	447040
9.09	10.3940	452765
9.19	10.4750	456289
9.29	10.5553	459789
9.39	10.6104	462188
9.49	10.6586	464288
9.59	10.7045	466288
9.69	10.7670	469012
9.79	10.8634	473212
9.89	10.9277	476011
9.99	10.9851	478511
10.09	11.0017	479236
10.19	11.0098	479586
10.30	11.0110	479638
10.40	11.0110	479638

Comment:

Node: B-24

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0009	39
4.30	0.0023	100
4.39	0.0052	225
4.49	0.0189	825
4.59	0.0367	1600
4.69	0.0821	3575
4.79	0.1446	6299
4.89	0.2990	13023
4.99	0.7529	32796
5.09	1.5723	68491
5.19	2.5329	110335
5.29	3.4155	148780

Stage [ft]	Area [ac]	Area [ft2]
5.39	4.2792	186400
5.49	5.3580	233394
5.59	6.7203	292736
5.69	8.5950	374400
5.79	10.9507	477011
5.89	13.4549	586097
5.99	15.5139	675785
6.09	17.0822	744101
6.19	18.2563	795244
6.29	19.0602	830264
6.39	19.7070	858435
6.49	20.2424	881757
6.59	20.7009	901730
6.69	21.1594	921702
6.79	21.6081	941249
6.89	22.2038	967196
6.99	22.9079	997867
7.09	23.6625	1030737
7.19	24.3545	1060883
7.29	25.0713	1092104
7.39	25.8569	1126325
7.49	26.7394	1164769
7.59	27.5795	1201365
7.69	28.5585	1244009
7.79	29.7269	1294902
7.89	30.9497	1348170
7.99	32.0331	1395364
8.09	33.0930	1441533
8.19	33.9762	1480002
8.29	34.9150	1520897
8.39	35.9462	1565816
8.49	37.2081	1620784
8.59	38.6157	1682100
8.69	40.1789	1750191
8.79	41.6129	1812658
8.89	42.7279	1861226
8.99	43.5404	1896622
9.09	44.0896	1920544
9.19	44.5194	1939266
9.29	44.8551	1953889
9.39	45.1288	1965812
9.49	45.3389	1974961
9.59	45.5150	1982635
9.69	45.6287	1987585
9.79	45.7526	1992984
9.89	45.8416	1996858
9.99	45.8835	1998683
10.09	45.8989	1999358
10.19	45.9133	1999983

Stage [ft]	Area [ac]	Area [ft2]
10.29	45.9183	2000199
10.39	45.9183	2000199

Comment:

Node: B-25

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0011	50
4.30	0.0040	175
4.40	0.0099	433
4.50	0.0126	550
4.59	0.0184	800
4.70	0.0218	950
4.80	0.0252	1100
4.90	0.0330	1437
4.99	0.0407	1775
5.09	0.0476	2075
5.19	0.0580	2525
5.29	0.0706	3075
5.39	0.1067	4649
5.49	0.1739	7574
5.59	0.2502	10899
5.69	0.3632	15823
5.79	0.4797	20897
5.89	0.5957	25947
5.99	0.6898	30046
6.09	0.8160	35545
6.19	0.9491	41344
6.29	1.1035	48069
6.39	1.2378	53918
6.49	1.4002	60992
6.59	1.5729	68516
6.69	1.7531	76365
6.79	1.8983	82689
6.89	2.0314	88488
6.99	2.1215	92413
7.09	2.2093	96237
7.19	2.3281	101411
7.29	2.4526	106836

Stage [ft]	Area [ac]	Area [ft2]
7.39	2.6030	113385
7.49	2.7774	120984
7.59	2.9851	130033
7.69	3.1745	138282
7.79	3.3426	145606
7.89	3.5188	153280
7.99	3.6577	159329
8.09	3.7661	164053
8.19	3.8694	168553
8.29	3.9544	172252
8.39	4.0163	174952
8.49	4.0248	175319
8.59	4.0248	175319

Comment:

Node: B-26

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.60	0.0011	50
2.70	0.0044	190
2.80	0.0080	350
2.90	0.0143	625
3.00	0.0228	994
3.10	0.0362	1575
3.20	0.0459	2000
3.30	0.0608	2650
3.40	0.0861	3750
3.50	0.1125	4899
3.60	0.1567	6824
3.70	0.2083	9074
3.80	0.2565	11173
3.90	0.3225	14048
4.00	0.4269	18598
4.10	0.5492	23922
4.20	0.6703	29196
4.30	0.8011	34895
4.40	0.9308	40545
4.50	1.0708	46644
4.60	1.1902	51843
4.70	1.3434	58517

Stage [ft]	Area [ac]	Area [ft2]
4.80	1.5413	67141
4.90	1.7629	76790
5.00	2.0056	87363
5.10	2.2655	98687
5.20	2.5226	109885
5.30	2.7728	120784
5.40	2.9846	130008
5.50	3.2095	139806
5.60	3.4614	150780
5.70	3.7036	161328
5.80	3.9664	172777
5.90	4.2516	185200
6.00	4.5167	196749
6.10	4.7715	207847
6.20	5.0085	218171
6.30	5.2501	228694
6.40	5.4750	238493
6.50	5.6948	248067
6.60	5.8779	256041
6.70	6.1160	266414
6.80	6.3553	276838
6.90	6.6296	288786
7.00	6.8620	298910
7.10	7.1271	310459
7.20	7.4020	322432
7.30	7.6304	332381
7.40	7.8548	342154
7.50	8.0585	351028
7.60	8.2720	360327
7.70	8.4631	368651
7.80	8.6323	376025
7.90	8.7867	382749
8.00	8.9187	388498
8.10	9.0421	393872
8.20	9.1442	398322
8.30	9.2395	402471
8.40	9.3301	406421
8.50	9.4065	409745
8.60	9.4707	412545
8.70	9.5207	414720
8.80	9.5723	416969
8.90	9.6308	419519
9.00	9.6779	421569
9.10	9.7261	423668
9.20	9.7577	425043
9.30	9.7918	426533
9.40	9.7918	426533

Comment:

Node: B-27

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.92 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.92	0.0006	25
4.00	0.0017	75
4.09	0.0086	375
4.19	0.0189	825
4.29	0.0362	1575
4.39	0.0677	2950
4.49	0.1085	4724
4.59	0.1555	6774
4.69	0.2049	8924
4.79	0.2519	10974
4.89	0.2944	12823
4.99	0.3391	14773
5.09	0.3793	16523
5.19	0.4390	19122
5.29	0.5170	22522
5.39	0.6261	27271
5.49	0.7494	32646
5.59	0.8545	37220
5.69	0.9796	42669
5.79	1.1190	48744
5.89	1.2550	54668
5.99	1.3767	59967
6.09	1.4725	64141
6.19	1.5586	67891
6.29	1.6596	72290
6.39	1.7227	75040
6.49	1.7505	76250
6.59	1.7505	76250

Comment:

Node: B-28

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.87 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.87	0.0006	25
3.90	0.0008	36
4.00	0.0029	125
4.09	0.0069	300
4.19	0.0235	1025
4.29	0.0534	2325
4.39	0.0809	3525
4.49	0.1222	5324
4.59	0.1481	6449
4.69	0.1888	8224
4.79	0.2238	9749
4.89	0.2622	11423
4.99	0.3082	13423
5.09	0.3472	15123
5.19	0.3937	17148
5.29	0.4321	18822
5.39	0.4740	20647
5.49	0.5182	22572
5.59	0.5538	24122
5.69	0.5997	26121
5.79	0.6576	28646
5.89	0.7368	32096
5.99	0.8568	37320
6.09	1.0323	44969
6.19	1.2458	54268
6.29	1.4455	62967
6.39	1.6263	70841
6.49	1.7583	76590
6.59	1.8529	80714
6.69	1.8736	81613
6.79	1.8736	81613

Comment:

Node: B-29

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.31 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.31	0.0006	25
4.40	0.0027	117
4.50	0.0075	325
4.60	0.0216	942

Stage [ft]	Area [ac]	Area [ft2]
4.69	0.0344	1500
4.79	0.0471	2050
4.89	0.0608	2650
4.99	0.0775	3375
5.09	0.1102	4799
5.19	0.1521	6624
5.29	0.2031	8849
5.39	0.2628	11448
5.49	0.3156	13748
5.59	0.3759	16373
5.69	0.4419	19247
5.79	0.4987	21722
5.89	0.5417	23597
5.99	0.5893	25672
6.09	0.6496	28296
6.19	0.7024	30596
6.29	0.7701	33546
6.39	0.8734	38045
6.49	0.9629	41944
6.59	1.0760	46869
6.69	1.2200	53143
6.79	1.3571	59117
6.89	1.5023	65441
6.99	1.6355	71241
7.09	1.7554	76465
7.19	1.8352	79939
7.29	1.8799	81889
7.39	1.9052	82989
7.50	1.9187	83579
7.60	1.9187	83579

Comment:

Node: B-3

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	29.4176	1281429
-1.30	29.4256	1281779
-1.20	29.4485	1282779
-1.09	29.4715	1283779
-0.99	29.4973	1284903

Stage [ft]	Area [ac]	Area [ft2]
-0.89	29.5168	1285753
-0.80	29.5335	1286478
-0.70	29.5518	1287278
-0.60	29.5725	1288178
-0.50	29.5926	1289053
-0.40	29.6098	1289803
-0.30	29.6270	1290553
-0.20	29.6442	1291303
-0.10	29.6683	1292352
0.00	29.6832	1293002
0.09	29.7022	1293827
0.20	29.7251	1294827
0.30	29.7452	1295702
0.40	29.7716	1296852
0.50	29.8026	1298202
0.60	29.8382	1299751
0.70	29.8697	1301126
0.80	29.8996	1302426
0.89	29.9243	1303501
0.99	29.9518	1304701
1.09	29.9771	1305801
1.20	30.0035	1306950
1.30	30.0281	1308025
1.40	30.0597	1309400
1.50	30.0907	1310750
1.60	30.1131	1311725
1.70	30.1498	1313325
1.80	30.1773	1314524
1.90	30.2095	1315924
2.00	30.2405	1317274
2.10	30.2812	1319049
2.20	30.3151	1320524
2.30	30.3432	1321748
2.40	30.3851	1323573
2.50	30.4212	1325148
2.60	30.4763	1327548
2.70	30.5285	1329822
2.80	30.5871	1332372
2.90	30.6439	1334847
3.00	30.7093	1337696
3.10	30.7965	1341496
3.20	30.8843	1345320
3.30	30.9842	1349670
3.40	31.0909	1354319
3.50	31.2372	1360693
3.60	31.4180	1368567
3.70	31.6647	1379316
3.80	31.9729	1392739
3.90	32.3780	1410387

Stage [ft]	Area [ac]	Area [ft2]
4.00	32.8601	1431384
4.10	33.4058	1455156
4.20	34.1305	1486726
4.30	34.9701	1523297
4.40	35.9118	1564316
4.50	36.9848	1611060
4.59	38.1486	1661753
4.69	39.5419	1722445
4.79	40.9449	1783562
4.89	42.2728	1841404
4.99	43.5904	1898796
5.09	44.8637	1954264
5.19	45.9862	2003158
5.29	46.9870	2046752
5.39	47.9889	2090396
5.49	48.9661	2132965
5.59	49.8763	2172610
5.69	50.6705	2207205
5.79	51.4245	2240051
5.89	52.1366	2271072
5.99	52.7570	2298093
6.09	53.3411	2323540
6.19	53.8117	2344037
6.29	54.2581	2363484
6.39	54.6512	2380607
6.49	55.0581	2398330
6.59	55.4598	2415827
6.69	55.8190	2431475
6.79	56.1771	2447073
6.89	56.5036	2461296
6.99	56.8318	2475594
7.09	57.0969	2487143
7.19	57.2915	2495617
7.29	57.4309	2501691
7.39	57.5233	2505715
7.49	57.6025	2509165
7.59	57.6639	2511840
7.69	57.7351	2514939
7.79	57.7936	2517489
7.89	57.8211	2518689
7.99	57.8389	2519464
8.09	57.8544	2520138
8.19	57.8716	2520888
8.30	57.8934	2521838
8.39	57.9072	2522438
8.49	57.9079	2522469
8.59	57.9079	2522469

Comment:

Node: B-30

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.06 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.06	0.0006	25
4.10	0.0013	57
4.20	0.0039	169
4.30	0.0063	275
4.39	0.0103	450
4.49	0.0172	750
4.60	0.0281	1225
4.69	0.0396	1725
4.79	0.0539	2350
4.89	0.0786	3425
4.99	0.1383	6024
5.09	0.2163	9424
5.19	0.3001	13073
5.29	0.4005	17448
5.39	0.5515	24022
5.49	0.7282	31721
5.59	0.9750	42469
5.69	1.2498	54443
5.79	1.6108	70166
5.89	2.0538	89463
5.99	2.6988	117559
6.09	3.3926	147780
6.19	3.9521	172152
6.29	4.4255	192774
6.39	4.8926	213122
6.49	5.3247	231944
6.59	5.6931	247992
6.69	5.9932	261065
6.79	6.2601	272689
6.89	6.4999	283137
6.99	6.6784	290911
7.09	6.8098	296635
7.19	6.9165	301285
7.29	6.9883	304409
7.39	7.0193	305759
7.50	7.0319	306309
7.59	7.0457	306909
7.69	7.0514	307159
7.80	7.0532	307238
7.90	7.0532	307238

Comment:

Node: B-31

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.05	2.5341	110385
0.10	2.5375	110535
0.20	2.5395	110623
0.30	2.5427	110760
0.40	2.5467	110935
0.50	2.5489	111030
0.60	2.5548	111285
0.70	2.5597	111502
0.80	2.5632	111653
0.90	2.5674	111835
1.00	2.5706	111977
1.10	2.5743	112135
1.20	2.5812	112435
1.30	2.5869	112685
1.40	2.5915	112885
1.50	2.5961	113085
1.60	2.6012	113310
1.70	2.6053	113485
1.80	2.6100	113693
1.90	2.6130	113820
2.00	2.6156	113935
2.10	2.6210	114172
2.20	2.6290	114518
2.30	2.6328	114685
2.40	2.6365	114847
2.50	2.6407	115028
2.60	2.6471	115310
2.70	2.6556	115676
2.80	2.6601	115872
2.90	2.6695	116284
3.00	2.6758	116559
3.10	2.6821	116834
3.20	2.6879	117084
3.30	2.6976	117509
3.40	2.7080	117959
3.50	2.7180	118397
3.60	2.7286	118859
3.70	2.7499	119784
3.80	2.7682	120584
3.90	2.7831	121234
4.00	2.8084	122334
4.10	2.8273	123159

Stage [ft]	Area [ac]	Area [ft2]
4.20	2.8457	123958
4.30	2.8732	125158
4.40	2.9002	126333
4.50	2.9306	127658
4.59	2.9668	129233
4.69	3.0201	131557
4.79	3.0706	133757
4.89	3.1424	136882
4.99	3.2428	141256
5.09	3.3358	145306
5.19	3.4362	149680
5.29	3.5492	154604
5.39	3.6801	160304
5.49	3.7960	165353
5.59	3.9297	171177
5.69	4.0525	176526
5.79	4.1896	182501
5.89	4.3526	189600
5.99	4.5500	198199
6.09	4.7377	206372
6.19	4.8995	213422
6.29	5.0693	220820
6.39	5.2403	228270
6.49	5.4234	236243
6.59	5.6007	243967
6.69	5.7717	251416
6.79	5.9290	258265
6.89	6.0931	265415
6.99	6.2515	272314
7.09	6.4041	278963
7.19	6.5487	285262
7.29	6.7197	292711
7.39	6.9079	300910
7.49	7.1644	312083
7.59	7.5036	326856
7.69	7.9225	345104
7.79	8.4040	366076
7.89	8.8762	386648
7.99	9.3278	406321
8.09	9.7100	422969
8.19	10.1031	440091
8.29	10.5002	457389
8.39	10.8537	472787
8.49	11.1676	486460
8.59	11.4052	496809
8.69	11.4924	500610
8.79	11.4924	500610

Comment:

Node: B-32

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0006	25
3.10	0.0063	275
3.21	0.0171	746
3.31	0.0267	1164
3.40	0.0344	1500
3.50	0.0689	3000
3.60	0.1222	5324
3.70	0.2077	9049
3.80	0.3001	13073
3.90	0.4005	17448
4.00	0.4792	20872
4.10	0.5693	24797
4.20	0.6565	28596
4.30	0.7431	32371
4.40	0.8464	36870
4.50	0.9641	41994
4.60	1.0656	46419
4.70	1.1580	50443
4.80	1.2699	55318
4.90	1.3801	60117
5.00	1.5218	66291
5.10	1.6756	72990
5.20	1.8443	80339
5.30	2.0119	87638
5.40	2.1599	94087
5.50	2.3120	100712
5.60	2.4882	108386
5.70	2.7028	117734
5.80	3.0121	131207
5.90	3.4293	149380
6.00	3.8000	165528
6.10	4.1363	180176
6.20	4.4823	195249
6.30	4.8237	210122
6.40	5.1583	224695
6.50	5.5370	241193
6.60	5.9347	258515
6.70	6.4064	279063
6.80	6.9579	303085
6.90	7.6138	331656
7.00	8.3007	361577
7.10	8.9457	389673

Stage [ft]	Area [ac]	Area [ft2]
7.20	9.5660	416694
7.30	10.1938	444041
7.40	10.8399	472187
7.50	11.4998	500933
7.60	12.2774	534804
7.70	13.2030	575123
7.80	14.1567	616668
7.90	15.1449	659712
8.00	16.2082	706031
8.10	17.3410	755374
8.20	18.4428	803368
8.30	19.4126	845612
8.40	20.2768	883257
8.50	21.0733	917952
8.60	21.8107	950073
8.70	22.5377	981744
8.80	23.1162	1006941
8.90	23.5598	1026263
9.00	23.8031	1036862
9.10	23.9620	1043786
9.20	24.0515	1047685
9.30	24.1187	1050610
9.40	24.1726	1052959
9.50	24.2329	1055584
9.60	24.2834	1057784
9.70	24.3270	1059684
9.80	24.3643	1061308
9.90	24.4010	1062908
10.00	24.4412	1064658
10.10	24.4791	1066308
10.20	24.5164	1067932
10.30	24.5571	1069707
10.40	24.5915	1071207
10.50	24.6196	1072432
10.60	24.6437	1073481
10.70	24.6437	1073481

Comment:

Node: B-33

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.44 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.44	0.0006	25
4.50	0.0015	64
4.59	0.0046	200
4.69	0.0115	500
4.79	0.0218	950
4.89	0.0390	1700
4.99	0.0780	3400
5.09	0.1613	7024
5.19	0.3064	13348
5.29	0.5406	23547
5.39	0.8923	38870
5.49	1.3284	57867
5.59	1.8352	79939
5.69	2.2386	97512
5.79	2.6403	115010
5.89	3.0213	131607
5.99	3.3570	146230
6.09	3.6261	157954
6.19	3.8671	168452
6.29	4.0789	177676
6.39	4.3101	187750
6.49	4.5552	198424
6.59	4.8341	210572
6.69	5.1009	222195
6.79	5.3270	232044
6.89	5.4997	239568
6.99	5.6661	246817
7.09	5.8148	253291
7.19	5.9479	259090
7.29	6.0673	264290
7.39	6.1843	269389
7.49	6.2727	273239
7.59	6.3616	277113
7.69	6.4236	279813
7.79	6.4477	280863
7.89	6.4644	281587
8.00	6.4705	281856
8.10	6.4705	281856

Comment:

Node: B-34

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.78 ft

Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.78	0.0006	25
4.80	0.0007	31
4.90	0.0013	56
5.00	0.0019	81
5.10	0.0027	119
5.20	0.0035	154
5.30	0.0043	189
5.40	0.0055	242
5.49	0.0080	350
5.60	0.0112	487
5.70	0.0149	650
5.79	0.0207	900
5.89	0.0281	1225
5.99	0.0350	1525
6.09	0.0465	2025
6.19	0.0625	2725
6.29	0.0872	3799
6.40	0.1171	5099
6.49	0.1521	6624
6.59	0.2181	9499
6.69	0.2973	12948
6.79	0.4023	17523
6.89	0.5388	23472
6.99	0.7219	31446
7.09	0.9589	41769
7.19	1.2240	53318
7.29	1.4977	65241
7.39	1.7726	77215
7.49	2.0676	90063
7.59	2.3287	101436
7.69	2.5892	112785
7.79	2.8216	122909
7.89	3.0592	133257
7.99	3.2772	142756
8.09	3.5349	153979
8.19	3.8402	167278
8.29	4.2464	184975
8.39	4.7222	205698
8.49	5.2903	230444
8.59	5.9387	258690
8.69	6.6354	289036
8.79	6.9998	304909
8.89	7.1868	313058
8.99	7.3079	318332
9.09	7.3756	321282
9.19	7.4141	322957
9.29	7.4238	323382

Stage [ft]	Area [ac]	Area [ft2]
9.40	7.4282	323571
9.50	7.4282	323571

Comment:

Node: B-35

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.58	0.0006	25
5.60	0.0006	28
5.70	0.0010	43
5.80	0.0016	71
5.90	0.0022	94
6.00	0.0026	115
6.10	0.0036	158
6.19	0.0040	175
6.29	0.0080	350
6.39	0.0161	700
6.49	0.0344	1500
6.59	0.0666	2900
6.69	0.1027	4474
6.79	0.1704	7424
6.89	0.2743	11948
6.99	0.4539	19772
7.09	0.7024	30596
7.19	1.0610	46219
7.29	1.4742	64216
7.39	1.8966	82614
7.49	2.4193	105386
7.59	3.0764	134007
7.69	3.8792	168977
7.79	4.8702	212147
7.89	5.9944	261115
7.99	7.2689	316633
8.09	8.4281	367126
8.19	9.4879	413295
8.29	10.4233	454039
8.39	11.2049	488085
8.49	11.9142	518981
8.59	12.5351	546027
8.69	13.0762	569599

Stage [ft]	Area [ac]	Area [ft2]
8.79	13.5571	590546
8.89	14.0466	611868
8.99	14.5510	633840
9.09	15.0875	657212
9.19	15.7296	685184
9.29	16.7224	728428
9.39	17.5017	762373
9.49	17.8976	779621
9.59	18.1846	792119
9.69	18.3607	799793
9.79	18.4795	804967
9.89	18.5644	808667
9.99	18.6293	811492
10.09	18.6597	812816
10.19	18.6827	813816
10.29	18.6913	814191
10.40	18.6993	814541
10.49	18.7022	814666
10.60	18.7062	814841
10.70	18.7071	814883
10.80	18.7096	814991
10.90	18.7100	815006
11.00	18.7100	815006

Comment:

Node: B-36

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.94	0.0006	25
1.00	0.0011	50
1.10	0.0016	71
1.20	0.0041	180
1.30	0.0109	475
1.40	0.0157	683
1.50	0.0197	858
1.60	0.0250	1087
1.70	0.0293	1275
1.80	0.0339	1475
1.90	0.0407	1775
2.00	0.0488	2125

Stage [ft]	Area [ac]	Area [ft2]
2.10	0.0614	2675
2.20	0.0729	3175
2.30	0.0835	3637
2.40	0.0935	4074
2.50	0.1010	4399
2.60	0.1044	4549
2.70	0.1096	4774
2.80	0.1136	4949
2.90	0.1166	5079
3.00	0.1199	5224
3.10	0.1245	5424
3.20	0.1262	5499
3.30	0.1328	5784
3.40	0.1360	5924
3.50	0.1377	5999
3.60	0.1417	6174
3.70	0.1475	6424
3.80	0.1547	6737
3.90	0.1584	6899
4.00	0.1611	7016
4.10	0.1681	7324
4.20	0.1773	7724
4.30	0.2003	8724
4.40	0.2290	9974
4.50	0.2668	11623
4.60	0.3145	13698
4.70	0.3489	15198
4.80	0.3845	16748
4.89	0.4132	17998
4.99	0.4436	19322
5.09	0.4792	20872
5.19	0.5245	22847
5.29	0.5670	24697
5.39	0.5985	26072
5.49	0.6289	27396
5.59	0.6674	29071
5.69	0.7047	30696
5.79	0.7454	32471
5.89	0.7942	34595
5.99	0.8481	36945
6.09	0.9004	39220
6.19	0.9595	41794
6.29	1.0278	44769
6.39	1.1150	48569
6.49	1.2275	53468
6.59	1.3916	60617
6.69	1.6601	72315
6.79	2.1255	92588
6.89	2.7900	121534

Stage [ft]	Area [ac]	Area [ft2]
6.99	3.5745	155704
7.09	4.5919	200023
7.19	5.6834	247567
7.29	6.8861	299960
7.39	8.1078	353178
7.49	9.4019	409545
7.59	10.8933	474512
7.69	12.5953	548652
7.79	14.2801	622042
7.89	15.9942	696707
7.99	17.6302	767972
8.09	19.3420	842537
8.19	21.1123	919652
8.29	22.9348	999042
8.39	24.7947	1080056
8.49	26.5885	1158195
8.59	28.4328	1238535
8.69	30.5475	1330647
8.79	32.8710	1431859
8.89	35.1365	1530546
8.99	37.3722	1627933
9.09	39.3479	1713996
9.19	41.0132	1786536
9.29	42.3004	1842604
9.39	43.3212	1887073
9.49	44.1786	1924418
9.59	44.8511	1953714
9.69	45.5340	1983460
9.79	46.0900	2007682
9.89	46.5755	2028829
9.99	47.0415	2049126
10.09	47.4282	2065974
10.19	47.7295	2079097
10.29	48.0227	2091871
10.39	48.2425	2101444
10.49	48.4078	2108643
10.59	48.5782	2116067
10.69	48.7148	2122017
10.79	48.8399	2127466
10.89	48.9621	2132790
10.99	49.0511	2136665
11.09	49.1222	2139764
11.19	49.1905	2142739
11.29	49.2439	2145064
11.39	49.2772	2146513
11.49	49.3127	2148063
11.59	49.3500	2149688
11.69	49.3747	2150763
11.79	49.3879	2151338

Stage [ft]	Area [ac]	Area [ft2]
11.89	49.4040	2152038
11.99	49.4235	2152888
12.09	49.4407	2153637
12.19	49.4505	2154062
12.29	49.4574	2154362
12.39	49.4631	2154612
12.49	49.4688	2154862
12.59	49.4728	2155037
12.70	49.4750	2155131
12.80	49.4772	2155229
12.90	49.4797	2155337
12.99	49.4815	2155412
13.09	49.4832	2155487
13.20	49.4845	2155543
13.30	49.4851	2155572
13.40	49.4859	2155607
13.50	49.4870	2155654
13.60	49.4883	2155712
13.69	49.4889	2155737
13.80	49.4898	2155776
13.90	49.4904	2155802
14.00	49.4932	2155924
14.10	49.4932	2155924

Comment:

Node: B-37

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.85 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.85	0.0006	25
5.90	0.0007	29
6.00	0.0008	37
6.10	0.0010	45
6.20	0.0013	56
6.29	0.0017	75
6.39	0.0069	300
6.49	0.0344	1500
6.59	0.0763	3325
6.69	0.1343	5849
6.79	0.2186	9524
6.89	0.3701	16123

Stage [ft]	Area [ac]	Area [ft2]
6.99	0.5601	24397
7.09	0.7902	34420
7.19	1.0438	45469
7.29	1.3003	56642
7.39	1.6073	70016
7.49	1.9763	86088
7.59	2.3671	103111
7.69	2.7866	121384
7.79	3.2250	140481
7.89	3.5860	156204
7.99	3.8884	169377
8.09	4.2040	183126
8.19	4.5248	197099
8.29	4.9224	214421
8.39	5.3040	231044
8.49	5.6725	247092
8.59	6.0380	263015
8.69	6.3559	276863
8.79	7.2511	315858
8.89	7.6287	332306
8.99	7.8163	340480
9.09	7.9305	345454
9.19	8.0011	348528
9.29	8.0700	351528
9.39	8.1251	353928
9.49	8.1405	354602
9.59	8.1405	354602

Comment:

Node: B-38

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.80	0.0006	25
1.90	0.0029	125
2.00	0.0098	425
2.10	0.0321	1400
2.20	0.0947	4124
2.30	0.1785	7774
2.40	0.2720	11848
2.50	0.3449	15023

Stage [ft]	Area [ac]	Area [ft2]
2.60	0.3977	17323
2.70	0.4350	18947
2.80	0.4717	20547
2.90	0.4987	21722
3.00	0.5342	23272
3.10	0.5566	24247
3.20	0.5710	24872
3.30	0.5830	25397
3.40	0.5899	25697
3.51	0.5962	25972
3.60	0.6043	26321
3.71	0.6134	26721
3.80	0.6249	27221
3.90	0.6352	27671
4.01	0.6450	28096
4.10	0.6513	28371
4.21	0.6589	28701
4.31	0.6657	28996
4.41	0.6720	29271
4.50	0.6777	29521
4.61	0.6834	29771
4.70	0.6903	30071
4.80	0.6995	30471
4.90	0.7093	30896
5.00	0.7185	31296
5.10	0.7299	31796
5.20	0.7403	32246
5.30	0.7546	32871
5.40	0.7684	33471
5.50	0.7810	34020
5.60	0.7948	34620
5.70	0.8114	35345
5.80	0.8349	36370
5.90	0.8631	37595
6.00	0.8929	38895
6.10	0.9216	40145
6.20	0.9468	41244
6.30	0.9761	42519
6.40	0.9996	43544
6.50	1.0410	45344
6.60	1.0897	47469
6.70	1.1563	50368
6.80	1.2447	54218
6.90	1.3646	59442
7.00	1.5339	66816
7.10	1.7623	76765
7.20	2.0320	88513
7.30	2.3637	102961
7.40	2.7126	118159

Stage [ft]	Area [ac]	Area [ft2]
7.50	3.1252	136132
7.60	3.6055	157054
7.70	4.1317	179976
7.80	4.6734	203573
7.90	5.2294	227795
8.00	5.7981	252566
8.10	6.3909	278388
8.20	7.0933	308984
8.30	7.8324	341179
8.40	8.5428	372125
8.50	9.2177	401521
8.60	9.9315	432617
8.70	10.7200	466963
8.80	11.6083	505657
8.90	12.5930	548552
9.00	13.6541	594771
9.10	14.8023	644789
9.20	15.9948	696732
9.30	17.2492	751375
9.40	18.3952	801293
9.50	19.6444	855711
9.60	20.9097	910828
9.70	22.2307	968371
9.80	23.4611	1021964
9.90	24.6426	1073432
10.00	25.7949	1123625
10.10	26.7589	1165619
10.20	27.4481	1195640
10.30	28.1006	1224062
10.40	28.7169	1250908
10.50	29.3860	1280054
10.60	29.8646	1300901
10.70	30.1641	1313950
10.80	30.3793	1323323
10.90	30.5469	1330622
11.00	30.6760	1336247
11.10	30.7845	1340971
11.20	30.8711	1344745
11.30	30.9285	1347245
11.40	30.9698	1349045
11.50	31.0042	1350545
11.60	31.0306	1351695
11.70	31.0479	1352444
11.80	31.0679	1353319
11.90	31.0817	1353919
12.00	31.0915	1354344
12.11	31.0986	1354657
12.20	31.1035	1354869
12.30	31.1075	1355044

Stage [ft]	Area [ac]	Area [ft2]
12.40	31.1093	1355119
12.51	31.1098	1355142
12.61	31.1104	1355169
12.71	31.1108	1355188
12.81	31.1118	1355230
12.91	31.1118	1355230

Comment:

Node: B-39

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.94 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.94	0.0006	25
4.00	0.0010	44
4.10	0.0015	64
4.20	0.0020	86
4.29	0.0046	200
4.39	0.0184	800
4.49	0.0425	1850
4.59	0.0780	3400
4.69	0.1228	5349
4.79	0.1699	7399
4.89	0.2422	10549
4.99	0.3225	14048
5.09	0.4155	18098
5.19	0.5417	23597
5.29	0.6714	29246
5.39	0.8045	35045
5.49	0.9388	40895
5.59	1.0656	46419
5.69	1.1689	50918
5.79	1.2670	55193
5.89	1.3755	59917
5.99	1.4478	63067
6.09	1.5230	66341
6.19	1.5804	68841
6.29	1.6332	71140
6.39	1.6883	73540
6.49	1.7393	75765
6.59	1.7841	77715
6.69	1.8329	79839

Stage [ft]	Area [ac]	Area [ft2]
6.79	1.8748	81664
6.89	1.9373	84389
6.99	2.0067	87413
7.09	2.0773	90488
7.19	2.1496	93637
7.29	2.2214	96762
7.39	2.2902	99762
7.49	2.3757	103486
7.59	2.4796	108011
7.69	2.5909	112860
7.79	2.6965	117459
7.89	2.8004	121984
7.99	2.9082	126683
8.09	3.0442	132607
8.19	3.1802	138532
8.29	3.3099	144181
8.39	3.4522	150380
8.49	3.5963	156654
8.59	3.7208	162078
8.69	3.8562	167978
8.79	4.0008	174277
8.89	4.1437	180501
8.99	4.2751	186225
9.09	4.3911	191274
9.19	4.4921	195674
9.29	4.5976	200273
9.39	4.7101	205173
9.49	4.8214	210022
9.59	4.9201	214321
9.69	5.0177	218571
9.79	5.1078	222495
9.89	5.1904	226095
9.99	5.2484	228619
10.09	5.3264	232019
10.19	5.3798	234344
10.29	5.4320	236618
10.39	5.4647	238043
10.49	5.4911	239193
10.59	5.5175	240343
10.69	5.5502	241768
10.79	5.5841	243243
10.89	5.6174	244692
10.99	5.6484	246042
11.09	5.6828	247542
11.19	5.7120	248817
11.29	5.7499	250467
11.39	5.7832	251916
11.49	5.8176	253416
11.59	5.8498	254816

Stage [ft]	Area [ac]	Area [ft2]
11.69	5.8808	256166
11.79	5.9089	257391
11.89	5.9433	258890
11.99	5.9777	260390
12.09	6.0116	261865
12.19	6.0455	263340
12.29	6.0741	264590
12.39	6.1046	265915
12.49	6.1344	267214
12.59	6.1671	268639
12.69	6.1998	270064
12.79	6.2331	271514
12.89	6.2647	272889
12.99	6.2974	274313
13.09	6.3255	275538
13.19	6.3593	277013
13.29	6.3915	278413
13.39	6.4196	279638
13.49	6.4558	281212
13.59	6.4908	282737
13.69	6.5229	284137
13.79	6.5567	285612
13.89	6.5889	287012
13.99	6.6296	288786
14.09	6.6623	290211
14.19	6.7128	292411
14.29	6.7570	294336
14.39	6.7909	295811
14.49	6.8259	297335
14.59	6.8683	299185
14.69	6.9102	301010
14.79	6.9366	302160
14.89	6.9693	303584
14.99	6.9940	304659
15.09	7.0204	305809
15.19	7.0480	307009
15.29	7.0703	307984
15.39	7.0841	308584
15.49	7.0884	308772
15.59	7.0884	308772

Comment:

Node: B-4

Scenario: Existing
Type: Stage/Area

Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.24	0.0006	25
2.30	0.0012	54
2.40	0.0016	68
2.50	0.0023	100
2.60	0.0036	158
2.70	0.0051	221
2.80	0.0065	284
2.90	0.0081	354
3.00	0.0098	425
3.10	0.0138	600
3.20	0.0218	950
3.30	0.0284	1237
3.40	0.0350	1525
3.50	0.0453	1975
3.60	0.0637	2775
3.70	0.1021	4449
3.80	0.1492	6499
3.90	0.2324	10124
4.00	0.3208	13973
4.10	0.4304	18747
4.20	0.5595	24372
4.30	0.7185	31296
4.40	0.8963	39045
4.50	1.0897	47469
4.59	1.2745	55518
4.69	1.5345	66841
4.79	1.8197	79264
4.89	2.1422	93313
4.99	2.4939	108636
5.09	2.9140	126933
5.19	3.4098	148530
5.29	4.0169	174977
5.39	4.6413	202173
5.49	5.4946	239343
5.59	6.2463	272089
5.69	7.1581	311808
5.79	8.1176	353603
5.89	8.9485	389798
5.99	9.7140	423143
6.09	10.5255	458489
6.19	11.3237	493259
6.29	12.1150	527730
6.39	12.9092	562325
6.49	13.7327	598195
6.59	14.6170	636715

Stage [ft]	Area [ac]	Area [ft2]
6.69	15.6309	680884
6.79	16.6753	726378
6.89	17.7869	774797
6.99	19.1291	833264
7.09	20.4145	889256
7.19	21.5536	938875
7.29	22.5722	983244
7.39	23.6034	1028163
7.49	24.5261	1068357
7.59	25.2457	1099703
7.69	25.9303	1129524
7.79	26.6235	1159720
7.89	27.3563	1191641
7.99	28.1379	1225686
8.09	28.8271	1255707
8.19	29.3940	1280404
8.29	30.0184	1307600
8.39	30.7093	1337696
8.49	31.3572	1365918
8.59	31.9826	1393164
8.69	32.6265	1421210
8.79	33.1774	1445207
8.89	33.6479	1465704
8.99	34.0835	1484677
9.09	34.4674	1501400
9.19	34.7887	1515398
9.29	35.0980	1528871
9.39	35.3746	1540919
9.49	35.5399	1548118
9.59	35.5735	1549582
9.69	35.5735	1549582

Comment:

Node: B-40

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.90 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.90	0.0006	25
4.01	0.0007	32
4.11	0.0009	39
4.21	0.0011	46

Stage [ft]	Area [ac]	Area [ft2]
4.30	0.0023	100
4.40	0.0109	475
4.50	0.0316	1375
4.60	0.0574	2500
4.70	0.1148	4999
4.80	0.1813	7899
4.90	0.2542	11074
5.00	0.3277	14273
5.10	0.4040	17598
5.20	0.4992	21747
5.30	0.6352	27671
5.40	0.8395	36570
5.50	1.2395	53993
5.60	1.8495	80564
5.70	2.6311	114610
5.80	3.3742	146980
5.90	4.0358	175802
6.00	4.6430	202248
6.10	5.2690	229519
6.20	5.9594	259590
6.30	6.6623	290211
6.40	7.3992	322307
6.50	8.3276	362752
6.60	9.5166	414545
6.70	10.8336	471912
6.80	12.3101	536228
6.90	13.8142	601745
7.00	15.1581	660287
7.10	16.2036	705831
7.20	17.0019	740601
7.30	17.5562	764748
7.40	17.9298	781021
7.50	18.1920	792444
7.60	18.4261	802643
7.70	18.6431	812092
7.80	18.8187	819741
7.90	18.9960	827464
8.00	19.1389	833689
8.10	19.2226	837338
8.20	19.3001	840713
8.30	19.3632	843462
8.40	19.4183	845862
8.50	19.4301	846373
8.60	19.4301	846373

Comment: This basin doesn't belong in this Town's model.

Node: B-5

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.66	0.0011	50
2.70	0.0029	125
2.80	0.0075	325
2.90	0.0115	500
3.00	0.0218	950
3.10	0.0379	1650
3.20	0.0511	2225
3.30	0.0620	2700
3.40	0.0717	3125
3.50	0.0809	3525
3.60	0.0901	3924
3.70	0.0998	4349
3.80	0.1165	5074
3.90	0.1380	6012
4.00	0.1561	6799
4.10	0.1871	8149
4.20	0.2192	9549
4.30	0.2611	11373
4.39	0.3214	13998
4.49	0.3954	17223
4.59	0.4786	20847
4.69	0.5767	25122
4.79	0.6748	29396
4.89	0.7976	34745
4.99	0.9371	40820
5.09	1.0524	45844
5.19	1.1815	51468
5.29	1.3319	58017
5.39	1.5052	65566
5.49	1.6888	73565
5.59	1.8989	82714
5.69	2.1358	93038
5.79	2.4365	106136
5.89	2.7717	120734
5.99	3.1780	138432
6.09	3.7386	162853
6.19	4.3916	191299
6.29	5.0475	219871
6.39	5.8171	253391
6.49	6.5103	283587
6.59	7.2006	313658
6.69	7.8783	343179

Stage [ft]	Area [ac]	Area [ft2]
6.79	8.5153	370925
6.89	9.1253	397497
6.99	9.7100	422969
7.09	10.2282	445541
7.19	10.7297	467388
7.29	11.2261	489010
7.39	11.7793	513106
7.49	12.4077	540478
7.59	13.0934	570349
7.69	13.8010	601170
7.79	14.7289	641589
7.89	15.4158	671510
7.99	15.9420	694432
8.09	16.3833	713655
8.19	16.7718	730577
8.29	17.1229	745875
8.39	17.3909	757549
8.49	17.6681	769622
8.59	17.9338	781196
8.69	18.2041	792969
8.79	18.4795	804967
8.89	18.7653	817416
8.99	19.0918	831639
9.09	19.3982	844987
9.19	19.6909	857735
9.29	19.9554	869259
9.39	20.1752	878833
9.49	20.3887	888131
9.59	20.6842	901005
9.69	21.1295	920402
9.79	21.4784	935600
9.89	21.6529	943199
9.99	21.7028	945374
10.09	21.7344	946749
10.19	21.7539	947598
10.29	21.7705	948323
10.39	21.7741	948481
10.49	21.7741	948481

Comment:

Node: B-6

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft

Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.28	0.0006	25
0.30	0.0007	29
0.40	0.0011	49
0.50	0.0016	69
0.60	0.0033	146
0.70	0.0046	200
0.80	0.0075	325
0.89	0.0132	575
1.00	0.0207	900
1.09	0.0310	1350
1.20	0.0511	2225
1.30	0.0683	2975
1.40	0.0844	3675
1.50	0.1044	4549
1.60	0.1182	5149
1.70	0.1337	5824
1.80	0.1526	6649
1.90	0.1796	7824
2.00	0.2158	9399
2.10	0.2611	11373
2.20	0.3294	14348
2.30	0.4155	18098
2.40	0.5239	22822
2.50	0.6347	27646
2.60	0.7712	33596
2.70	0.9164	39920
2.80	1.0576	46069
2.90	1.2171	53018
3.00	1.3692	59642
3.10	1.5482	67441
3.20	1.7410	75840
3.30	1.9436	84664
3.40	2.1622	94187
3.50	2.3820	103761
3.60	2.6093	113660
3.70	2.8325	123384
3.80	3.0649	133507
3.90	3.2864	143156
4.00	3.5326	153879
4.10	3.7994	165503
4.20	4.0336	175702
4.30	4.2912	186925
4.40	4.5615	198698
4.50	4.8432	210972
4.59	5.0602	220421
4.69	5.3230	231869
4.79	5.5508	241793

Stage [ft]	Area [ac]	Area [ft2]
4.89	5.7780	251691
4.99	6.0047	261565
5.09	6.2285	271314
5.19	6.4230	279788
5.29	6.6411	289286
5.39	6.8603	298835
5.49	7.0721	308059
5.59	7.2729	316808
5.69	7.5099	327131
5.79	7.7142	336030
5.89	7.9156	344804
5.99	8.1509	355053
6.09	8.4017	365976
6.19	8.6536	376950
6.29	8.9416	389498
6.39	9.2814	404296
6.49	9.6498	420344
6.59	10.0641	438391
6.69	10.4887	456889
6.79	10.9891	478686
6.89	11.5699	503983
6.99	12.2349	532954
7.09	13.0435	568174
7.19	13.7792	600220
7.29	14.5642	634415
7.39	15.3521	668736
7.49	16.1158	702006
7.59	16.8091	732202
7.69	17.5384	763973
7.79	18.3045	797344
7.89	19.1572	834489
7.99	20.0926	875233
8.09	21.0848	918452
8.19	22.0758	961622
8.29	23.1449	1008190
8.39	24.2059	1054409
8.49	25.3955	1106227
8.59	26.5277	1155546
8.69	27.5394	1199615
8.79	28.4925	1241134
8.89	29.4399	1282404
8.99	30.5073	1328898
9.09	31.7565	1383315
9.19	32.9708	1436208
9.29	34.0565	1483502
9.39	34.9821	1523822
9.49	35.8154	1560117
9.59	36.4678	1588538
9.69	36.9935	1611435

Stage [ft]	Area [ac]	Area [ft2]
9.79	37.4393	1630857
9.89	37.7968	1646430
9.99	38.1457	1661628
10.09	38.4711	1675801
10.19	38.7523	1688050
10.29	39.0111	1699323
10.39	39.2596	1710147
10.49	39.4966	1720470
10.59	39.7209	1730244
10.69	39.9356	1739593
10.79	40.1112	1747242
10.89	40.2741	1754341
10.99	40.4434	1761715
11.09	40.6379	1770189
11.19	40.8089	1777638
11.29	40.9868	1785387
11.39	41.1670	1793236
11.49	41.3082	1799385
11.59	41.4591	1805959
11.69	41.6204	1812983
11.79	41.7506	1818657
11.89	41.8992	1825131
11.99	42.0358	1831080
12.09	42.1621	1836580
12.19	42.2963	1842429
12.29	42.4151	1847603
12.39	42.5362	1852878
12.49	42.6504	1857852
12.59	42.7749	1863276
12.69	42.9023	1868825
12.79	43.0314	1874450
12.89	43.1560	1879874
12.99	43.2684	1884773
13.09	43.4039	1890673
13.19	43.5227	1895847
13.29	43.6443	1901146
13.39	43.7597	1906170
13.49	43.8836	1911570
13.59	44.0007	1916669
13.69	44.1103	1921443
13.79	44.2227	1926343
13.89	44.3467	1931742
13.99	44.4666	1936966
14.09	44.5923	1942441
14.19	44.7157	1947815
14.29	44.8413	1953289
14.39	44.9584	1958388
14.49	45.0893	1964088
14.59	45.2057	1969162

Stage [ft]	Area [ac]	Area [ft2]
14.69	45.3291	1974536
14.79	45.4370	1979236
14.89	45.5409	1983760
14.99	45.6264	1987485
15.09	45.7182	1991484
15.19	45.8111	1995534
15.29	45.9144	2000033
15.39	46.0189	2004582
15.49	46.1118	2008632
15.59	46.2060	2012731
15.69	46.3110	2017306
15.79	46.4022	2021280
15.89	46.5055	2025779
15.99	46.6008	2029929
16.09	46.7006	2034278
16.19	46.7982	2038528
16.29	46.9003	2042977
16.39	47.0099	2047752
16.49	47.1132	2052251
16.59	47.1993	2056000
16.69	47.3008	2060425
16.79	47.3823	2063974
16.89	47.4736	2067949
16.99	47.5677	2072048
17.09	47.6566	2075923
17.19	47.7364	2079397
17.29	47.8230	2083172
17.39	47.9028	2086646
17.49	47.9831	2090146
17.59	48.0635	2093645
17.69	48.1547	2097620
17.79	48.2356	2101144
17.89	48.3217	2104894
17.99	48.3969	2108168
18.09	48.4887	2112168
18.19	48.5736	2115867
18.29	48.6454	2118992
18.39	48.7326	2122792
18.49	48.8141	2126341
18.59	48.9053	2130316
18.69	49.0281	2135665
18.79	49.1303	2140114
18.89	49.2290	2144414
19.00	49.3179	2148288
19.10	49.3891	2151388
19.20	49.4539	2154212
19.30	49.5314	2157587
19.40	49.5997	2160561
19.50	49.6685	2163561

Stage [ft]	Area [ac]	Area [ft2]
19.60	49.7288	2166186
19.70	49.7976	2169185
19.80	49.8562	2171735
19.90	49.9176	2174410
20.00	49.9801	2177134
20.10	50.0484	2180109
20.20	50.1121	2182884
20.30	50.1712	2185458
20.40	50.2384	2188383
20.50	50.2917	2190707
20.60	50.3583	2193607
20.70	50.4237	2196457
20.80	50.4880	2199256
20.90	50.5459	2201781
21.00	50.6102	2204581
21.10	50.6739	2207355
21.20	50.7456	2210480
21.30	50.8099	2213279
21.40	50.8782	2216254
21.50	50.9362	2218779
21.60	51.0159	2222253
21.70	51.0664	2224453
21.80	51.1318	2227303
21.90	51.1972	2230152
22.00	51.2764	2233602
22.10	51.3442	2236551
22.20	51.4119	2239501
22.30	51.4813	2242526
22.40	51.5439	2245250
22.50	51.6064	2247975
22.60	51.6684	2250674
22.70	51.7464	2254074
22.80	51.8107	2256874
22.90	51.8738	2259623
23.00	51.9387	2262448
23.10	52.0001	2265123
23.20	52.0672	2268047
23.30	52.1366	2271072
23.40	52.2141	2274446
23.50	52.2824	2277421
23.60	52.3581	2280720
23.70	52.4304	2283870
23.80	52.4982	2286820
23.90	52.5751	2290169
24.00	52.6491	2293394
24.10	52.7139	2296218
24.20	52.7971	2299843
24.30	52.8660	2302842
24.40	52.9394	2306042

Stage [ft]	Area [ac]	Area [ft2]
24.50	53.0152	2309342
24.60	53.0915	2312666
24.70	53.1621	2315741
24.80	53.2413	2319190
24.90	53.3176	2322515
25.00	53.3847	2325439
25.10	53.4588	2328664
25.20	53.5362	2332039
25.30	53.6137	2335413
25.40	53.6963	2339013
25.50	53.7681	2342137
25.60	53.8444	2345462
25.70	53.9201	2348761
25.80	53.9930	2351936
25.90	54.0636	2355011
26.00	54.1371	2358210
26.10	54.2111	2361435
26.20	54.2891	2364834
26.30	54.3649	2368134
26.40	54.4429	2371533
26.50	54.5187	2374833
26.60	54.5933	2378082
26.70	54.6765	2381707
26.80	54.7666	2385631
26.90	54.8440	2389006
27.00	54.9301	2392756
27.10	55.0202	2396680
27.20	55.1069	2400454
27.30	55.1883	2404004
27.40	55.2744	2407753
27.50	55.3714	2411978
27.60	55.4649	2416052
27.70	55.5562	2420027
27.80	55.6509	2424151
27.90	55.7346	2427801
28.00	55.8242	2431700
28.10	55.9252	2436100
28.20	56.0376	2440999
28.30	56.1501	2445898
28.40	56.2362	2449648
28.50	56.3469	2454472
28.60	56.4451	2458747
28.70	56.5575	2463646
28.80	56.6683	2468470
28.90	56.7676	2472795
29.00	56.8892	2478094
29.10	56.9988	2482868
29.20	57.1119	2487793
29.30	57.2295	2492917

Stage [ft]	Area [ac]	Area [ft2]
29.40	57.3477	2498066
29.50	57.4699	2503391
29.60	57.5836	2508340
29.70	57.7006	2513439
29.80	57.8229	2518764
29.90	57.9439	2524038
30.00	58.0708	2529562
30.10	58.2033	2535336
30.20	58.3301	2540861
30.30	58.4598	2546510
30.40	58.6107	2553084
30.50	58.7479	2559058
30.60	58.8724	2564483
30.70	58.9906	2569632
30.80	59.1146	2575031
30.90	59.2093	2579156
31.00	59.3108	2583580
31.10	59.3935	2587180
31.20	59.4600	2590079
31.30	59.5409	2593604
31.40	59.5932	2595878
31.50	59.6477	2598253
31.60	59.6901	2600103
31.70	59.7452	2602502
31.80	59.7877	2604352
31.90	59.8325	2606302
32.00	59.8772	2608252
32.10	59.9203	2610126
32.20	59.9507	2611451
32.30	60.0006	2613626
32.40	60.0258	2614726
32.50	60.0597	2616201
32.60	60.0924	2617625
32.70	60.1211	2618875
32.80	60.1527	2620250
32.90	60.1681	2620921
33.00	60.1681	2620921

Comment:

Node: B-7

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.83	2.0400	88863
-1.80	2.0406	88888
-1.70	2.0423	88963
-1.60	3.4543	150467
-1.49	3.4660	150980
-1.40	4.9477	215521
-1.29	4.9603	216071
-1.19	4.9672	216371
-1.09	4.9747	216696
-0.99	4.9867	217221
-0.89	4.9970	217671
-0.79	5.0108	218271
-0.69	5.0240	218846
-0.59	5.0355	219346
-0.49	5.0464	219821
-0.39	5.0596	220396
-0.29	5.0688	220796
-0.19	5.0837	221445
-0.09	5.0963	221995
0.00	5.1152	222820
0.10	5.1342	223645
0.20	5.1566	224620
0.30	5.1778	225545
0.40	5.1939	226245
0.50	5.2082	226870
0.60	5.2243	227570
0.70	5.2398	228245
0.80	5.2576	229019
0.90	5.2754	229794
1.00	5.2937	230594
1.10	5.3075	231194
1.20	5.3207	231769
1.30	5.3402	232619
1.40	5.3695	233894
1.50	5.3844	234544
1.60	5.4010	235269
1.70	5.4343	236718
1.80	5.4630	237968
1.90	5.4957	239393
2.00	5.5227	240568
2.10	5.5462	241593
2.20	5.5726	242743
2.30	5.5984	243867
2.40	5.6420	245767
2.50	5.7138	248892
2.60	5.7947	252416
2.70	5.9066	257291
2.80	6.1057	265964

Stage [ft]	Area [ac]	Area [ft2]
2.90	6.3542	276788
3.00	6.6566	289961
3.10	7.0898	308834
3.20	7.6425	332906
3.30	8.2863	360952
3.40	8.9445	389623
3.50	9.6601	420794
3.60	10.3631	451415
3.70	11.1418	485335
3.80	11.9589	520930
3.90	12.9631	564675
4.00	14.0776	613218
4.10	15.2809	665636
4.20	16.7557	729878
4.30	18.5960	810042
4.40	20.3996	888606
4.50	22.2084	967396
4.60	23.9942	1045185
4.70	25.6480	1117226
4.80	27.2806	1188341
4.89	28.6205	1246709
4.99	30.4040	1324398
5.09	32.0498	1396089
5.19	33.7248	1469054
5.29	35.3368	1539269
5.39	36.7352	1600186
5.49	37.8577	1649080
5.59	38.5520	1679326
5.69	39.0231	1699848
5.79	39.4759	1719570
5.89	39.8483	1735793
5.99	40.1863	1750516
6.09	40.4778	1763215
6.19	40.7378	1774538
6.29	40.9381	1783262
6.39	41.0901	1789886
6.49	41.2147	1795310
6.59	41.3415	1800835
6.69	41.4671	1806309
6.79	41.5986	1812033
6.89	41.7449	1818407
6.99	41.8683	1823781
7.09	41.9905	1829106
7.19	42.1213	1834805
7.29	42.2556	1840654
7.39	42.3359	1844154
7.49	42.3956	1846753
7.59	42.4433	1848828
7.69	42.4811	1850478

Stage [ft]	Area [ac]	Area [ft2]
7.79	42.5167	1852028
7.89	42.5511	1853527
7.99	42.5879	1855127
8.09	42.5933	1855365
8.19	42.5933	1855365

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-8

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.67 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.67	0.0006	25
3.70	0.0013	58
3.80	0.0020	87
3.90	0.0025	108
4.00	0.0034	150
4.09	0.0046	200
4.20	0.0071	308
4.30	0.0098	425
4.39	0.0121	525
4.49	0.0189	825
4.60	0.0362	1575
4.69	0.0482	2100
4.79	0.0671	2925
4.89	0.0889	3874
4.99	0.1228	5349
5.09	0.1750	7624
5.19	0.2634	11473
5.29	0.3896	16973
5.39	0.5463	23797
5.49	0.7035	30646
5.59	0.8906	38795
5.69	1.1414	49718
5.79	1.4220	61942
5.89	1.7726	77215
5.99	2.1749	94737
6.09	2.5393	110610
6.19	2.8709	125058
6.29	3.2221	140356
6.39	3.5343	153954
6.49	3.8161	166228

Stage [ft]	Area [ac]	Area [ft2]
6.59	4.0416	176051
6.69	4.2321	184350
6.79	4.3836	190949
6.89	4.4961	195849
6.99	4.5621	198723
7.09	4.5965	200223
7.19	4.6200	201248
7.30	4.6281	201598
7.40	4.6328	201806
7.50	4.6361	201948
7.60	4.6381	202036
7.70	4.6392	202083
7.80	4.6433	202263
7.90	4.6433	202263

Comment:

Node: B-9

Scenario: Existing
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0109	475
-1.30	0.0109	476
-1.20	0.0110	479
-1.10	0.0111	483
-1.00	0.0112	486
-0.90	0.0112	489
-0.80	0.0113	493
-0.70	0.0114	496
-0.60	0.0115	500
-0.50	0.0117	508
-0.40	0.0119	516
-0.30	0.0121	525
-0.20	0.0125	544
-0.10	0.0129	562
0.00	0.0133	578
0.10	0.0137	595
0.20	0.0145	629
0.30	0.0150	652
0.40	0.0153	668
0.50	0.0159	694
0.60	0.0169	737

Stage [ft]	Area [ac]	Area [ft2]
0.70	0.0177	770
0.80	0.0181	790
0.90	0.0191	830
1.00	0.0201	875
1.09	0.0207	900
1.20	0.0230	1002
1.30	0.0232	1010
1.40	0.0234	1018
1.50	0.0237	1031
1.60	0.0243	1060
1.70	0.0247	1075
1.80	0.0249	1085
1.90	0.0252	1096
2.00	0.0253	1104
2.10	0.0255	1110
2.20	0.0256	1116
2.30	0.0258	1122
2.40	0.0265	1156
2.50	0.0269	1172
2.60	0.0277	1206
2.70	0.0279	1217
2.80	0.0298	1300
2.90	0.0303	1321
3.00	0.0308	1341
3.10	0.0311	1354
3.20	0.0312	1360
3.30	0.0314	1367
3.40	0.0315	1373
3.50	0.0321	1400
3.60	0.0333	1450
3.70	0.0362	1575
3.80	0.0390	1700
3.90	0.0499	2175
4.00	0.0648	2825
4.10	0.0821	3575
4.20	0.1079	4699
4.30	0.1343	5849
4.40	0.1773	7724
4.50	0.2163	9424
4.59	0.2473	10774
4.69	0.2875	12523
4.79	0.3311	14423
4.89	0.3644	15873
4.99	0.3937	17148
5.09	0.4310	18772
5.19	0.4608	20072
5.29	0.5079	22122
5.39	0.5647	24597
5.49	0.6255	27246

Stage [ft]	Area [ac]	Area [ft2]
5.59	0.7317	31871
5.69	0.8436	36745
5.79	1.0455	45544
5.89	1.2510	54493
5.99	1.4117	61492
6.09	1.5281	66566
6.19	1.6343	71191
6.29	1.7095	74465
6.39	1.7560	76490
6.49	1.7910	78015
6.59	1.8243	79464
6.69	1.8478	80489
6.79	1.8673	81339
6.89	1.8845	82089
7.00	1.8977	82664
7.09	1.9098	83189
7.19	1.9230	83764
7.29	1.9367	84364
7.39	1.9539	85114
7.49	1.9654	85614
7.59	1.9662	85648
7.69	1.9662	85648

Comment:

Node: DISCHARGE TO GOLF COURSE

Scenario: Existing
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	0.00
0	0	0	10.0000	0.99
0	0	0	20.0000	1.79
0	0	0	30.0000	2.15
0	0	0	40.0000	2.55
0	0	0	50.0000	2.53
0	0	0	60.0000	3.22
0	0	0	64.0000	4.81
0	0	0	70.0000	4.50
0	0	0	80.0000	3.42
0	0	0	90.0000	2.71
0	0	0	96.0000	2.50

Comment: BASED ON PREVIOUS STUDY CONDUCTED FOR THE GOLF COURSE.
USED PREVIOUS DATA AS A BASIS FOR THE TAILWATER CONDITIONS FROM HH ICPR MODEL

Node: STORAGE 52ND ST

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.62	0.86	37462
4.23	1.72	74923

Comment: Approx. 1980 LF of 5'x5' Exfil running along SW 52nd St

1.72 ac-ft

Node: STORAGE ON SITE 19

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.66	0.11	4574
3.32	0.21	9148

Comment: SW 31ST ST DRAINAGE IMPROVEMENTS

https://dpep.broward.org/Enviros/Default.aspx?PossePresentation=SurfaceWaterLicense&PosseObjectId=33557971

0.21 AC-FT
TOP OF TRENCH: 3.32 NAVD

WT:2

BOT OF TRENCH: -0.93 NAVD

Node: STORAGE ON SITE 1

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.50	2.68	116741
4.00	4.34	189050
5.00	7.80	339768
6.00	11.37	495277
7.00	16.69	727016
8.00	25.49	1110344
9.00	37.78	1645697
10.00	53.55	2332638
11.00	71.07	3095809

Comment:

Node: STORAGE ON SITE 11

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.00	0.39	16988
3.50	0.78	33977

Comment: NEED MORE INFORMATION

Node: STORAGE ON SITE 12

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
9.20	0.04	1742
9.40	0.16	6970

Stage [ft]	Volume [ac-ft]	Volume [ft3]
9.60	0.36	15682
9.80	0.61	26572
10.00	0.93	40511
10.20	1.28	55757
10.40	1.64	71438
10.60	2.00	87120
10.80	2.36	102802

Comment:

Node: STORAGE ON SITE 13

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.00	0.00	0
5.00	0.09	3920
6.00	0.18	7841
7.00	0.27	11761
8.00	0.36	15682
9.00	0.49	21344
10.00	0.71	30928
11.00	1.65	71874
12.00	3.20	139392

Comment: K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2004 Apartment complex discharging to onsite retention\Calculations - Revised .pdf.pdf

Node: STORAGE ON SITE 14

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	0.27	11761
4.50	0.54	23522

Comment:

https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=77827255&hash=1DC8E684EBA90B369411BEA9A491E7D2E453F1F2

Node: STORAGE ON SITE 15

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	0.16	6970
3.00	0.33	14375
3.50	0.51	22216
4.00	0.71	30928
4.50	0.93	40511
5.00	1.16	50530
5.50	1.41	61420
6.00	1.67	72745
6.50	1.72	74923
7.00	1.72	74923

Comment: STORAGE IS USED BY MULTIPLE BASINS IN THE AREA

Node: STORAGE ON SITE 17

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	2.52	109858
4.50	5.04	219717

Comment: USING PERMIT FROM BROWARD THAT IS FOR MUCH LARGER AREA AND ASSUMING THAT STAGE STORAGE IS 1/5 OF THAT NUMBER FOR A ROUGH ESTIMATE
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=37159263&hash=D3675B834D18CCEC4310DCD6F0656AEC0FCED9C3

Node: STORAGE ON SITE 18

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.50	0.00	0
5.00	3.61	157252
5.50	7.54	328442
6.00	11.79	513572
6.50	16.36	712642
7.00	21.77	948301
7.50	28.52	1242331
8.00	36.61	1594732
8.50	46.04	2005502
9.00	57.37	2499037
9.50	70.64	3077078
10.00	85.34	3717410
10.50	101.47	4420033
11.00	119.03	5184947
11.50	138.02	6012151

Comment: NEEDS MORE INFORMATION

Node: STORAGE ON SITE 2

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.50	0.02	871
4.50	0.04	1742

Comment:

Node: STORAGE ON SITE 3

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft

Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
5.00	0.00	0
5.50	0.00	0
6.00	8.92	388555
6.50	18.58	809345
7.00	28.99	1262804
7.50	40.15	1748934
8.00	52.05	2267298
8.50	64.70	2818332
9.00	77.72	3385483
9.50	90.74	3952634
10.00	103.75	4519350

Comment:

Node: STORAGE ON SITE 4

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	7.00	304920
3.00	14.00	609840
3.50	21.00	914760
4.00	28.00	1219680
4.50	35.00	1524600
5.00	42.00	1829520
5.50	49.00	2134440
6.00	56.00	2439360
6.50	63.00	2744280
7.00	70.00	3049200
7.50	78.31	3411184
8.00	90.57	3945229
8.50	108.08	4707965
9.00	130.85	5699826
9.50	158.87	6920377
10.00	191.51	8342176

Comment:

Node: STORAGE ON SITE 5

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.16	6970
4.00	0.32	13939
4.50	0.48	20909
5.00	0.64	27878
5.50	0.79	34412
6.00	0.95	41382
6.50	1.11	48352
7.00	1.22	53143
7.50	1.49	64904
8.00	1.86	81022
8.50	2.33	101495
9.00	2.89	125888
9.50	3.56	155074
10.00	4.32	188179
10.50	5.37	233917
11.00	6.88	299693
11.50	8.86	385942
12.00	11.19	487436

Comment:

Node: STORAGE ON SITE 6

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.63	0.36	15464
5.75	0.71	30928

Comment:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=72592592&hash=BAF6E372B1EA46D84A6355CC91B4A7800C3A1DDA

Node: STORAGE ON SITE 8

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
6.00	0.27	11761
7.00	0.53	23087
8.00	0.66	28750

Comment:

Node: STORAGE ON SITE 9

Scenario: Existing
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.01	436
3.75	0.02	871
4.00	0.03	1307
4.25	0.06	2614
4.50	0.07	3049
4.75	0.10	4356
5.00	0.13	5663
5.25	0.16	6970
5.50	0.20	8712
5.75	0.24	10454
6.00	0.28	12197
6.25	0.33	14375
6.50	0.38	16553
6.75	0.44	19166
7.00	0.50	21780
7.25	0.59	25700
7.50	0.72	31363
7.75	0.90	39204
8.00	1.13	49223
8.25	1.40	60984
8.50	1.73	75359
8.75	2.12	92347
9.00	2.63	114563
9.25	3.23	140699
9.50	3.94	171626

Stage [ft]	Volume [ac-ft]	Volume [ft3]
9.75	4.75	206910
10.00	5.66	246550

Comment: RECREATION GREEN AREA USED AS A STORAGE SITE

Node: B-1

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.60 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.60	0.0006	25
3.70	0.0024	104
3.80	0.0031	137
3.90	0.0042	183
4.00	0.0058	254
4.10	0.0075	325
4.20	0.0115	500
4.30	0.0172	750
4.40	0.0316	1375
4.50	0.0545	2375
4.60	0.1354	5899
4.70	0.3018	13148
4.80	0.4883	21272
4.90	0.7213	31421
5.00	0.9899	43119
5.10	1.2516	54518
5.20	1.5149	65991
5.30	1.8042	78590
5.40	2.0871	90913
5.50	2.3987	104486
5.60	2.7533	119934
5.70	3.1527	137332
5.80	3.6445	158754
5.90	4.0726	177401
6.00	4.4542	194024
6.10	4.8387	210772
6.20	5.2306	227845
6.30	5.6145	244567
6.40	6.1080	266064
6.50	6.6537	289836
6.60	7.2936	317708
6.70	8.0069	348778
6.80	8.7649	381799

Stage [ft]	Area [ac]	Area [ft2]
6.90	9.5631	416569
7.00	10.3171	449415
7.10	11.1240	484560
7.20	11.9618	521055
7.30	12.7353	554751
7.40	13.5094	588471
7.50	14.1877	618017
7.60	14.7673	643264
7.70	15.2947	666236
7.80	15.8226	689233
7.90	16.3861	713780
8.00	16.9628	738901
8.10	17.5223	763273
8.20	18.0818	787645
8.30	18.6580	812741
8.40	19.2341	837838
8.50	19.7890	862010
8.60	20.3325	885682
8.70	20.7846	905379
8.80	21.1571	921602
8.90	21.3705	930901
9.00	21.5157	937225
9.10	21.5978	940801
9.20	21.5978	940801

Comment:

Node: B-10

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0184	800
-1.30	0.0196	852
-1.20	0.0203	883
-1.10	0.0224	975
-1.00	0.0230	1000
-0.90	0.0249	1083
-0.80	0.0266	1158
-0.70	0.0277	1207
-0.60	0.0285	1244
-0.50	0.0302	1315
-0.40	0.0311	1355

Stage [ft]	Area [ac]	Area [ft2]
-0.30	0.0326	1420
-0.20	0.0359	1565
-0.10	0.0413	1800
0.00	0.0494	2150
0.09	0.0545	2375
0.20	0.0625	2725
0.30	0.0660	2875
0.40	0.0708	3083
0.50	0.0729	3175
0.60	0.0760	3312
0.70	0.0792	3450
0.80	0.0834	3633
0.90	0.0867	3775
0.99	0.0895	3899
1.09	0.0941	4099
1.20	0.1012	4408
1.30	0.1062	4624
1.40	0.1106	4816
1.50	0.1159	5049
1.60	0.1217	5299
1.70	0.1261	5493
1.80	0.1314	5724
1.90	0.1343	5849
2.00	0.1400	6099
2.10	0.1458	6349
2.20	0.1538	6699
2.30	0.1618	7049
2.40	0.1681	7324
2.50	0.1762	7674
2.60	0.1854	8074
2.70	0.1917	8349
2.80	0.2014	8774
2.90	0.2129	9274
3.00	0.2196	9565
3.10	0.2304	10036
3.20	0.2381	10374
3.30	0.2479	10799
3.40	0.2663	11598
3.50	0.2863	12473
3.60	0.3162	13773
3.70	0.3483	15173
3.80	0.3954	17223
3.90	0.4470	19472
4.00	0.5050	21997
4.10	0.5779	25172
4.20	0.7282	31721
4.30	0.9486	41319
4.40	1.2716	55393
4.50	1.6590	72265

Stage [ft]	Area [ac]	Area [ft2]
4.59	2.0549	89513
4.69	2.5243	109960
4.79	3.0511	132907
4.89	3.6772	160179
4.99	4.4163	192374
5.09	5.2897	230419
5.19	6.4810	282312
5.29	8.2025	357302
5.39	10.4847	456714
5.49	13.2650	577823
5.59	16.6685	726078
5.69	20.1775	878933
5.79	23.9161	1041786
5.89	27.6937	1206339
5.99	31.1075	1355044
6.09	33.9590	1479252
6.19	36.3571	1583714
6.29	38.2680	1666952
6.39	39.9046	1738243
6.49	41.5337	1809208
6.59	43.1399	1879174
6.69	44.8040	1951664
6.79	46.2932	2016531
6.89	47.7347	2079322
6.99	49.1067	2139089
7.09	50.4145	2196057
7.19	51.7722	2255199
7.29	53.1483	2315141
7.39	54.5313	2375383
7.49	55.9372	2436625
7.59	57.3443	2497916
7.69	58.8093	2561733
7.79	60.2996	2626649
7.89	61.8369	2693615
7.99	63.3283	2758582
8.09	64.9689	2830047
8.19	66.5579	2899263
8.29	68.0063	2962354
8.39	69.3657	3021572
8.49	70.6494	3077489
8.59	71.7633	3126008
8.69	72.7376	3168452
8.79	73.6638	3208797
8.89	74.5108	3245692
8.99	75.3630	3282812
9.09	76.1153	3315582
9.19	76.8624	3348128
9.29	77.6216	3381199
9.39	78.3263	3411894

Stage [ft]	Area [ac]	Area [ft2]
9.49	79.0918	3445240
9.59	79.8315	3477461
9.69	80.5442	3508506
9.79	81.2965	3541277
9.89	82.0563	3574373
9.99	82.8276	3607968
10.09	83.6843	3645288
10.19	84.6484	3687283
10.29	85.9659	3744675
10.39	87.2536	3800767
10.49	87.7689	3823214
10.59	88.0260	3834413
10.69	88.2165	3842712
10.79	88.3634	3849111
10.89	88.5121	3855585
10.99	88.6383	3861084
11.09	88.8173	3868883
11.19	88.9614	3875158
11.29	89.0526	3879132
11.39	89.1548	3883581
11.49	89.2558	3887981
11.59	89.3459	3891905
11.69	89.4268	3895430
11.79	89.5025	3898729
11.89	89.5559	3901054
11.99	89.5903	3902554
12.09	89.6127	3903529
12.19	89.6270	3904154
12.29	89.6385	3904654
12.39	89.6431	3904854
12.50	89.6444	3904910
12.60	89.6457	3904969
12.70	89.6484	3905083
12.80	89.6488	3905104
12.90	89.6530	3905286
13.00	89.6543	3905343
13.09	89.6569	3905453
13.20	89.6589	3905540
13.29	89.6597	3905578
13.40	89.6602	3905600
13.50	89.6615	3905653
13.60	89.6619	3905671
13.70	89.6625	3905697
13.80	89.6635	3905741
13.90	89.6651	3905813
14.00	89.6663	3905863
14.09	89.6672	3905903
14.20	89.6680	3905937
14.29	89.6689	3905978

Stage [ft]	Area [ac]	Area [ft2]
14.40	89.6706	3906053
14.49	89.6729	3906153
14.60	89.6741	3906203
14.70	89.6759	3906284
14.80	89.6763	3906298
14.90	89.6774	3906347
15.00	89.6779	3906367
15.10	89.6785	3906397
15.20	89.6796	3906444
15.30	89.6816	3906531
15.40	89.6820	3906546
15.50	89.6824	3906566
15.60	89.6831	3906596
15.70	89.6838	3906628
15.80	89.6848	3906669
15.90	89.6861	3906728
16.00	89.6872	3906773
16.10	89.6883	3906823
16.20	89.6894	3906871
16.30	89.6903	3906908
16.39	89.6907	3906928
16.50	89.6909	3906937
16.60	89.6911	3906945
16.70	89.6913	3906953
16.80	89.6916	3906965
16.90	89.6918	3906976
17.00	89.6924	3907001
17.10	89.6927	3907012
17.20	89.6929	3907022
17.30	89.6934	3907043
17.40	89.6942	3907080
17.50	89.6942	3907080

Comment:

Node: B-11

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	19.8875	866300
4.00	23.2501	1012775
4.50	25.9642	1131002

Stage [ft]	Area [ac]	Area [ft2]
5.00	41.6244	1813161
5.50	53.9220	2348844
6.00	58.6297	2553910
6.50	61.0130	2657725
7.00	61.0130	2657725

Comment:

Node: B-12

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	5.3562	233315
4.00	19.3591	843282
4.50	25.7000	1119494
5.00	29.3028	1276432
5.50	31.4405	1369549
6.00	33.8904	1476267
6.50	34.3276	1495309
7.00	34.4913	1502439
7.50	34.4913	1502439

Comment:

Node: B-13

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.66 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.66	0.0006	25
5.70	0.0008	33
5.80	0.0012	52
5.90	0.0017	76
6.00	0.0020	86
6.10	0.0022	95
6.20	0.0027	116
6.30	0.0030	130

Stage [ft]	Area [ac]	Area [ft2]
6.40	0.0032	138
6.50	0.0034	146
6.60	0.0038	166
6.69	0.0046	200
6.80	0.0054	233
6.89	0.0063	275
6.99	0.0069	300
7.10	0.0071	311
7.20	0.0074	321
7.30	0.0083	362
7.40	0.0090	393
7.50	0.0096	417
7.59	0.0109	475
7.70	0.0113	491
7.80	0.0119	520
7.90	0.0141	615
8.00	0.0149	650
8.10	0.0160	697
8.20	0.0189	825
8.29	0.0252	1100
8.39	0.0367	1600
8.49	0.0625	2725
8.59	0.1010	4399
8.69	0.1475	6424
8.79	0.1865	8124
8.89	0.2416	10524
8.99	0.2772	12073
9.09	0.3127	13623
9.19	0.3558	15498
9.29	0.3954	17223
9.39	0.4292	18698
9.49	0.4654	20272
9.59	0.5182	22572
9.69	0.5802	25272
9.79	0.6611	28796
9.89	0.7420	32321
9.99	0.8315	36220
10.09	0.9342	40695
10.19	1.0530	45869
10.29	1.2108	52743
10.39	1.3394	58342
10.49	1.4794	64441
10.59	1.6400	71440
10.69	1.8036	78565
10.79	1.9901	86688
10.89	2.2018	95912
10.99	2.4211	105461
11.09	2.6948	117384
11.19	2.9955	130483

Stage [ft]	Area [ac]	Area [ft2]
11.29	3.2617	142081
11.39	3.5435	154354
11.49	3.7713	164278
11.59	3.9383	171552
11.69	4.0617	176926
11.79	4.1650	181426
11.89	4.2533	185275
11.99	4.3239	188350
12.09	4.3911	191274
12.19	4.4484	193774
12.29	4.4840	195324
12.39	4.5173	196774
12.49	4.5305	197349
12.59	4.5437	197924
12.69	4.5489	198149
12.80	4.5525	198306
12.90	4.5540	198374
13.00	4.5540	198374

Comment:

Node: B-14

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.21	0.7816	34045
-0.20	0.7822	34070
-0.10	0.7896	34395
0.00	0.7936	34570
0.10	0.7997	34837
0.20	0.8019	34931
0.30	0.8078	35187
0.40	0.8120	35370
0.50	0.8160	35545
0.60	0.8200	35720
0.70	0.8223	35820
0.80	0.8292	36120
0.89	0.8326	36270
1.00	0.8362	36425
1.09	0.8401	36595
1.20	0.8481	36945
1.30	0.8530	37158

Stage [ft]	Area [ac]	Area [ft2]
1.40	0.8585	37395
1.50	0.8648	37670
1.60	0.8699	37895
1.70	0.8763	38170
1.80	0.8814	38395
1.90	0.8875	38657
2.00	0.8921	38861
2.10	0.8986	39145
2.20	0.9035	39355
2.30	0.9061	39470
2.40	0.9136	39795
2.50	0.9191	40036
2.60	0.9241	40253
2.70	0.9308	40545
2.80	0.9411	40995
2.90	0.9514	41444
3.00	0.9576	41714
3.10	0.9623	41919
3.20	0.9709	42294
3.30	0.9801	42694
3.40	0.9859	42944
3.50	0.9933	43269
3.60	0.9996	43544
3.70	1.0024	43663
3.80	1.0074	43882
3.90	1.0137	44157
4.00	1.0220	44519
4.10	1.0358	45119
4.20	1.0530	45869
4.30	1.0714	46669
4.40	1.0915	47544
4.50	1.1133	48494
4.59	1.1420	49743
4.69	1.1810	51443
4.79	1.2275	53468
4.89	1.2923	56293
4.99	1.3669	59542
5.09	1.4581	63517
5.19	1.5574	67841
5.29	1.6636	72465
5.39	1.7887	77915
5.49	1.9379	84414
5.59	2.1095	91888
5.69	2.3040	100362
5.79	2.5163	109610
5.89	2.7659	120484
5.99	3.0483	132782
6.09	3.3065	144031
6.19	3.5969	156679

Stage [ft]	Area [ac]	Area [ft2]
6.29	3.8614	168203
6.39	4.1007	178626
6.49	4.3383	188975
6.59	4.5730	199198
6.69	4.8094	209497
6.79	5.0734	220995
6.89	5.3763	234194
6.99	5.6679	246892
7.09	6.0225	262340
7.19	6.3203	275313
7.29	6.6118	288012
7.39	6.9051	300785
7.49	7.2058	313883
7.59	7.5065	326981
7.69	7.7991	339730
7.79	8.1159	353528
7.89	8.4309	367251
7.99	8.7615	381649
8.09	9.0931	396097
8.19	9.3519	407371
8.29	9.6194	419019
8.39	9.8581	429418
8.49	10.1186	440766
8.59	10.4313	454389
8.69	10.6712	464838
8.79	10.8371	472062
8.89	10.9530	477111
8.99	11.0637	481936
9.09	11.1716	486635
9.19	11.2984	492159
9.29	11.4367	498183
9.39	11.5475	503008
9.49	11.6152	505957
9.59	11.6927	509332
9.69	11.7598	512257
9.79	11.8332	515456
9.89	11.8860	517756
9.99	11.9406	520131
10.09	11.9945	522480
10.19	12.0318	524105
10.29	12.0593	525305
10.39	12.0731	525905
10.50	12.0770	526074
10.60	12.0792	526169
10.70	12.0792	526169

Comment:

Node: B-15

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.87	0.0006	25
1.90	0.0006	28
2.00	0.0009	39
2.10	0.0011	49
2.20	0.0021	90
2.30	0.0025	110
2.40	0.0031	135
2.50	0.0039	172
2.60	0.0062	271
2.70	0.0092	400
2.80	0.0207	900
2.90	0.0304	1325
3.00	0.0574	2500
3.10	0.1211	5274
3.20	0.1767	7699
3.30	0.2416	10524
3.40	0.3300	14373
3.50	0.4361	18997
3.60	0.5601	24397
3.70	0.6886	29996
3.80	0.8206	35745
3.90	0.9859	42944
4.00	1.1431	49793
4.10	1.3256	57742
4.20	1.5706	68416
4.30	1.8375	80039
4.40	2.1663	94362
4.50	2.4635	107311
4.59	2.7470	119659
4.69	3.1229	136032
4.79	3.5355	154004
4.89	3.9985	174177
4.99	4.5994	200348
5.09	5.2036	226670
5.19	5.8567	255116
5.29	6.5229	284137
5.39	7.1381	310934
5.49	7.7125	335955
5.59	8.1911	356802
5.69	8.6519	376875
5.79	9.0679	394997
5.89	9.4656	412320

Stage [ft]	Area [ac]	Area [ft2]
5.99	9.7927	426568
6.09	10.0469	437642
6.19	10.2500	446490
6.29	10.4319	454414
6.39	10.6259	462863
6.49	10.7952	470237
6.59	10.9610	477461
6.69	11.1263	484660
6.79	11.2904	491809
6.89	11.4643	499383
6.99	11.6158	505982
7.09	11.7638	512432
7.19	11.8975	518256
7.29	12.0381	524380
7.39	12.1385	528754
7.49	12.2252	532529
7.59	12.2940	535528
7.69	12.3474	537853
7.79	12.3910	539753
7.89	12.4323	541553
7.99	12.4708	543227
8.09	12.4995	544477
8.19	12.5236	545527
8.29	12.5465	546527
8.39	12.5683	547477
8.49	12.5781	547902
8.59	12.5884	548352
8.69	12.5924	548527
8.80	12.5976	548752
8.89	12.6022	548952
9.00	12.6051	549077
9.10	12.6062	549127
9.20	12.6068	549152
9.30	12.6139	549462
9.40	12.6139	549462

Comment:

Node: B-16

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.28	2.2426	97687
-0.20	2.2489	97962
-0.10	2.2564	98287
0.00	2.2638	98612
0.10	2.2741	99062
0.20	2.2799	99312
0.30	2.2856	99562
0.40	2.2931	99887
0.50	2.3009	100228
0.60	2.3109	100662
0.70	2.3180	100974
0.80	2.3252	101286
0.89	2.3350	101711
0.99	2.3419	102011
1.09	2.3499	102361
1.20	2.3614	102861
1.30	2.3717	103311
1.40	2.3780	103586
1.50	2.3901	104111
1.60	2.4021	104636
1.70	2.4159	105236
1.80	2.4291	105811
1.90	2.4492	106686
2.00	2.4675	107486
2.10	2.4847	108236
2.20	2.5134	109485
2.30	2.5519	111160
2.40	2.5944	113010
2.50	2.6420	115085
2.60	2.7051	117834
2.70	2.7831	121234
2.80	2.8732	125158
2.90	2.9381	127983
3.00	3.0356	132232
3.10	3.1412	136832
3.20	3.2359	140956
3.30	3.3363	145331
3.40	3.4505	150305
3.50	3.5619	155154
3.60	3.7088	161553
3.70	3.8723	168677
3.80	4.0777	177626
3.90	4.3394	189025
4.00	4.7072	205048
4.10	5.1520	224420
4.20	5.7235	249317
4.30	6.5034	283287
4.40	7.4577	324857
4.50	8.5227	371250

Stage [ft]	Area [ac]	Area [ft2]
4.59	9.3824	408695
4.69	10.2213	445241
4.79	10.8979	474712
4.89	11.4052	496809
4.99	11.8028	514131
5.09	12.1644	529879
5.19	12.5253	545602
5.29	12.9264	563075
5.39	13.2874	578798
5.49	13.5737	591271
5.59	13.7493	598920
5.69	13.8847	604819
5.79	14.0047	610044
5.89	14.1177	614968
5.99	14.2365	620142
6.09	14.3507	625117
6.19	14.4729	630441
6.29	14.6112	636465
6.39	14.7771	643689
6.49	14.9102	649488
6.59	15.0296	654688
6.69	15.1334	659212
6.79	15.1839	661412
6.89	15.2097	662537
6.99	15.2402	663861
7.09	15.2826	665711
7.19	15.3166	667189
7.29	15.3166	667189

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-17

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.73	0.0006	25
2.80	0.0016	69
2.90	0.0063	275
3.00	0.0212	925
3.10	0.0620	2700
3.20	0.1211	5274
3.30	0.2416	10524

Stage [ft]	Area [ac]	Area [ft2]
3.40	0.4310	18772
3.50	0.6295	27421
3.60	0.8757	38145
3.70	1.1661	50793
3.80	1.4547	63367
3.90	1.7370	75665
4.00	2.0165	87838
4.10	2.3080	100537
4.20	2.5886	112760
4.30	2.8583	124508
4.39	3.0632	133432
4.49	3.2675	142331
4.59	3.5056	152705
4.69	3.8086	165903
4.79	4.1300	179901
4.89	4.4989	195974
4.99	4.9345	214946
5.09	5.4693	238243
5.19	6.0179	262140
5.29	6.6480	289586
5.39	7.2786	317058
5.49	7.7963	339605
5.59	8.2461	359202
5.69	8.5985	374550
5.79	8.9606	390323
5.89	9.2860	404496
5.99	9.5689	416819
6.09	9.8150	427543
6.19	10.0802	439091
6.29	10.3418	450490
6.39	10.5995	461713
6.49	10.8675	473387
6.59	11.1532	485835
6.69	11.4247	497659
6.79	11.7225	510632
6.89	11.9796	521830
6.99	12.2177	532204
7.09	12.4025	540253
7.19	12.5477	546577
7.29	12.6762	552176
7.39	12.7910	557176
7.49	12.8885	561425
7.59	12.9586	564475
7.69	13.0171	567024
7.79	13.0727	569449
7.89	13.1152	571299
7.99	13.1428	572499
8.09	13.1500	572814
8.19	13.1500	572814

Comment:

Node: B-18

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.46	0.0006	25
1.50	0.0007	31
1.60	0.0011	47
1.70	0.0016	70
1.80	0.0022	95
1.90	0.0032	141
2.00	0.0060	262
2.10	0.0086	375
2.20	0.0143	625
2.30	0.0186	808
2.40	0.0281	1225
2.50	0.0482	2100
2.60	0.0712	3100
2.70	0.1010	4399
2.80	0.1274	5549
2.90	0.1526	6649
3.00	0.1848	8049
3.10	0.2221	9674
3.20	0.2571	11198
3.30	0.3007	13098
3.40	0.3437	14973
3.50	0.3879	16898
3.60	0.4344	18922
3.70	0.4763	20747
3.80	0.5348	23297
3.90	0.6048	26346
4.00	0.6955	30296
4.10	0.8298	36145
4.20	1.0157	44244
4.30	1.2584	54818
4.40	1.5322	66741
4.50	1.7904	77990
4.59	2.0079	87463
4.69	2.2139	96437
4.79	2.4583	107086
4.89	2.7034	117759

Stage [ft]	Area [ac]	Area [ft2]
4.99	2.9937	130408
5.09	3.3294	145031
5.19	3.6709	159904
5.29	4.0967	178451
5.39	4.5621	198723
5.49	5.1107	222620
5.59	5.4825	238818
5.69	5.7671	251216
5.79	5.9605	259640
5.89	6.1178	266489
5.99	6.2601	272689
6.09	6.4271	279963
6.19	6.5240	284187
6.29	6.6199	288361
6.39	6.7163	292561
6.49	6.8414	298010
6.59	7.1174	310034
6.69	7.2867	317408
6.79	7.3848	321682
6.89	7.4554	324757
6.99	7.5340	328181
7.09	7.6103	331506
7.19	7.6861	334805
7.29	7.7590	337980
7.39	7.8238	340805
7.49	7.8927	343804
7.59	7.9696	347154
7.69	8.0464	350503
7.79	8.1268	354003
7.89	8.2232	358202
7.99	8.2995	361527
8.09	8.3632	364301
8.19	8.4367	367501
8.29	8.5107	370725
8.39	8.6140	375225
8.49	8.7155	379649
8.59	8.7959	383149
8.69	8.8797	386798
8.79	8.9612	390348
8.89	9.0415	393847
8.99	9.1195	397247
9.09	9.1964	400596
9.19	9.2785	404171
9.29	9.3606	407746
9.39	9.4386	411145
9.49	9.5252	414920
9.59	9.6234	419194
9.69	9.7169	423268
9.79	9.8162	427593

Stage [ft]	Area [ac]	Area [ft2]
9.89	9.8977	431142
9.99	9.9780	434642
10.09	10.0515	437842
10.19	10.1393	441666
10.29	10.2265	445466
10.39	10.3315	450040
10.49	10.4422	454864
10.59	10.5519	459639
10.69	10.6563	464188
10.79	10.7447	468038
10.89	10.8204	471337
10.99	10.8853	474162
11.09	10.9501	476986
11.19	11.0333	480611
11.29	11.1372	485135
11.39	11.2255	488985
11.49	11.2944	491984
11.59	11.3661	495109
11.69	11.4350	498108
11.79	11.4884	500433
11.89	11.5257	502058
11.99	11.5589	503508
12.09	11.5968	505158
12.19	11.6427	507157
12.29	11.6760	508607
12.39	11.7179	510432
12.49	11.7451	511618
12.59	11.7451	511618

Comment:

Node: B-19

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.20	0.4700	20472
0.30	1.2092	52673
0.40	1.3999	60979
0.50	1.4094	61392
0.60	1.4208	61892
0.70	1.4306	62317
0.80	1.4426	62842

Stage [ft]	Area [ac]	Area [ft2]
0.90	1.4593	63566
1.00	1.4756	64279
1.10	1.4845	64666
1.20	1.4926	65016
1.30	1.5055	65579
1.40	1.5132	65916
1.50	1.5270	66516
1.60	1.5385	67016
1.70	1.5482	67441
1.80	1.5577	67853
1.90	1.5741	68566
2.00	1.5878	69166
2.10	1.6016	69766
2.20	1.6154	70366
2.30	1.6309	71041
2.40	1.6458	71690
2.50	1.6607	72340
2.60	1.6785	73115
2.70	1.7049	74265
2.80	1.7296	75340
2.90	1.7623	76765
3.00	1.8105	78864
3.10	1.8857	82139
3.20	1.9689	85764
3.30	2.0567	89588
3.40	2.1869	95262
3.50	2.3103	100637
3.60	2.4698	107586
3.70	2.6339	114735
3.80	2.8359	123534
3.90	3.0683	133657
4.00	3.3834	147380
4.10	3.7300	162478
4.20	4.1942	182701
4.30	4.7859	208472
4.40	5.5927	243617
4.50	6.6049	287712
4.60	7.7096	335830
4.70	8.9640	390473
4.80	10.2730	447490
4.90	11.6674	508232
5.00	13.2093	575398
5.10	14.8126	645239
5.20	16.5416	720554
5.30	18.2936	796869
5.40	19.9640	869634
5.50	21.4497	934350
5.60	22.7822	992393
5.70	23.8977	1040986

Stage [ft]	Area [ac]	Area [ft2]
5.80	24.9031	1084780
5.90	25.8305	1125175
6.00	26.5960	1158520
6.10	27.3006	1189216
6.20	27.9571	1217812
6.30	28.5694	1244484
6.40	29.1783	1271005
6.50	29.7458	1295727
6.60	30.3575	1322373
6.70	30.9555	1348420
6.80	31.6424	1378341
6.90	32.3166	1407712
7.00	33.0242	1438533
7.10	33.7392	1469679
7.20	34.3997	1498450
7.30	35.0607	1527246
7.40	35.7287	1556342
7.50	36.3863	1584988
7.60	37.0003	1611735
7.70	37.5868	1637281
7.80	38.1670	1662553
7.90	38.7448	1687725
8.00	39.2825	1711147
8.10	39.7617	1732019
8.20	40.1817	1750316
8.30	40.5869	1767964
8.40	40.9828	1785212
8.50	41.3753	1802309
8.60	41.8350	1822332
8.70	42.3377	1844229
8.80	42.7778	1863401
8.90	43.1749	1880699
9.00	43.4899	1894422
9.10	43.7413	1905371
9.20	43.9381	1913944
9.30	44.1212	1921918
9.40	44.3134	1930292
9.50	44.4942	1938166
9.60	44.6583	1945315
9.70	44.8253	1952589
9.80	44.9664	1958738
9.90	45.0893	1964088
10.00	45.1989	1968862
10.10	45.3033	1973411
10.20	45.3756	1976561
10.30	45.4502	1979811
10.40	45.5334	1983435
10.50	45.6201	1987210
10.60	45.7136	1991284

Stage [ft]	Area [ac]	Area [ft2]
10.70	45.7985	1994984
10.80	45.8892	1998933
10.90	45.9603	2002033
11.00	46.0464	2005782
11.10	46.1623	2010831
11.20	46.2513	2014706
11.30	46.3316	2018205
11.40	46.4183	2021980
11.50	46.5032	2025680
11.60	46.5835	2029179
11.70	46.5865	2029310
11.80	46.5865	2029310

Comment:

Node: B-2

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.66	0.0006	25
1.70	0.0014	59
1.80	0.0025	108
1.90	0.0092	400
2.00	0.0252	1100
2.10	0.0666	2900
2.20	0.1262	5499
2.30	0.2146	9349
2.40	0.3168	13798
2.50	0.4281	18648
2.60	0.5130	22347
2.70	0.5985	26072
2.80	0.7064	30771
2.90	0.8906	38795
3.00	1.2825	55868
3.10	1.7944	78165
3.20	2.3780	103586
3.30	2.9955	130483
3.40	3.5515	154704
3.50	3.9222	170852
3.60	4.1317	179976
3.70	4.2975	187200
3.80	4.4249	192749

Stage [ft]	Area [ac]	Area [ft2]
3.90	4.5276	197224
4.00	4.6447	202323
4.10	4.7354	206272
4.20	4.8335	210547
4.30	4.9729	216621
4.40	5.1761	225470
4.50	5.4263	236368
4.59	5.6977	248192
4.69	6.0609	264015
4.79	6.4799	282262
4.89	6.9332	302010
4.99	7.4439	324257
5.09	7.9850	347829
5.19	8.6128	375175
5.29	9.4311	410820
5.39	10.2523	446590
5.49	11.2278	489085
5.59	12.9104	562375
5.69	14.6583	638515
5.79	15.9070	692907
5.89	17.0443	742451
5.99	18.2689	795794
6.09	19.3495	842862
6.19	20.4788	892056
6.29	20.9861	914153
6.39	21.4532	934500
6.49	21.9719	957097
6.59	22.5573	982594
6.69	23.2149	1011240
6.79	23.9356	1042636
6.89	24.7074	1076256
6.99	25.5590	1113351
7.09	26.5357	1155896
7.19	27.5577	1200415
7.29	28.6153	1246484
7.39	29.7888	1297602
7.49	31.0111	1350845
7.59	32.0521	1396189
7.69	32.9783	1436533
7.79	33.8006	1472353
7.89	34.5391	1504524
7.99	35.2817	1536870
8.09	35.9990	1568116
8.19	36.6675	1597237
8.29	37.2941	1624533
8.39	37.9254	1652029
8.49	38.5870	1680851
8.59	39.1402	1704947
8.69	39.6871	1728769

Stage [ft]	Area [ac]	Area [ft2]
8.79	40.1450	1748717
8.89	40.5473	1766239
8.99	40.8950	1781387
9.09	41.1986	1794610
9.19	41.4339	1804859
9.29	41.6605	1814733
9.39	41.8832	1824431
9.49	42.0898	1833430
9.59	42.3107	1843054
9.69	42.5523	1853577
9.79	42.8381	1866026
9.89	43.1221	1878399
9.99	43.4481	1892597
10.09	43.7637	1906345
10.19	44.0179	1917419
10.29	44.2658	1928218
10.39	44.4993	1938391
10.49	44.6973	1947015
10.59	44.8982	1955764
10.69	45.1053	1964788
10.79	45.2924	1972937
10.89	45.4634	1980386
10.99	45.6401	1988085
11.09	45.8002	1995059
11.19	45.9718	2002533
11.29	46.1359	2009682
11.39	46.3121	2017356
11.49	46.4831	2024805
11.59	46.6449	2031854
11.69	46.8091	2039003
11.79	46.9629	2045702
11.89	47.1321	2053076
11.99	47.3100	2060825
12.09	47.4896	2068649
12.19	47.6790	2076898
12.29	47.8512	2084397
12.39	48.0113	2091371
12.49	48.1593	2097820
12.59	48.2712	2102694
12.69	48.4043	2108493
12.79	48.6058	2117267
12.89	48.7412	2123166
12.99	48.8525	2128016
13.09	48.9352	2131615
13.19	48.9891	2133965
13.29	49.0390	2136140
13.39	49.0763	2137765
13.49	49.1176	2139564
13.59	49.1567	2141264

Stage [ft]	Area [ac]	Area [ft2]
13.69	49.1894	2142689
13.79	49.2152	2143814
13.89	49.2445	2145089
13.99	49.2829	2146763
14.09	49.3208	2148413
14.19	49.3558	2149938
14.29	49.3982	2151788
14.39	49.4350	2153387
14.49	49.4769	2155212
14.59	49.5199	2157087
14.69	49.5647	2159037
14.79	49.6140	2161186
14.89	49.6875	2164386
14.99	49.8022	2169385
15.09	49.9118	2174160
15.19	50.0450	2179959
15.29	50.2011	2186758
15.39	50.3577	2193582
15.49	50.4685	2198406
15.59	50.5706	2202856
15.69	50.5792	2203230
15.79	50.5792	2203230

Comment:

Node: B-20

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	81.0865	3532128
-0.30	81.1043	3532903
-0.20	81.1456	3534703
-0.10	81.1927	3536753
0.00	81.2529	3539377
0.09	81.2942	3541177
0.20	81.3459	3543427
0.30	81.3947	3545552
0.40	81.4366	3547376
0.50	81.4893	3549676
0.60	81.5358	3551701
0.70	81.5909	3554100
0.80	81.6489	3556625

Stage [ft]	Area [ac]	Area [ft2]
0.89	81.7005	3558875
0.99	81.7596	3561449
1.09	81.8268	3564374
1.20	81.8928	3567249
1.30	81.9576	3570073
1.40	82.0225	3572898
1.50	82.0833	3575548
1.60	82.1435	3578172
1.70	82.2095	3581047
1.80	82.2772	3583996
1.90	82.3518	3587246
2.00	82.4379	3590995
2.10	82.5355	3595245
2.20	82.6307	3599394
2.30	82.7380	3604069
2.40	82.8408	3608543
2.50	82.9607	3613767
2.60	83.0755	3618767
2.70	83.2034	3624341
2.80	83.3274	3629740
2.90	83.4605	3635540
3.00	83.5925	3641289
3.10	83.7296	3647263
3.20	83.8565	3652787
3.30	83.9816	3658236
3.40	84.1124	3663936
3.50	84.2576	3670260
3.60	84.4045	3676659
3.70	84.5525	3683108
3.80	84.7069	3689832
3.90	84.8888	3697756
4.00	85.0661	3705480
4.10	85.2561	3713754
4.20	85.4540	3722378
4.30	85.6578	3731252
4.40	85.8902	3741375
4.50	86.1742	3753749
4.59	86.4795	3767047
4.69	86.8806	3784520
4.79	87.3517	3805042
4.89	87.9267	3830089
4.99	88.6722	3862559
5.09	89.7935	3911403
5.19	91.3761	3980343
5.29	93.6744	4080455
5.39	96.5694	4206563
5.49	100.0337	4357468
5.59	104.2853	4542668
5.69	109.4511	4767688

Stage [ft]	Area [ac]	Area [ft2]
5.79	115.8087	5044626
5.89	123.0013	5357935
5.99	130.1634	5669918
6.09	136.9451	5965328
6.19	143.2993	6242116
6.29	149.3528	6505806
6.39	154.8886	6746949
6.49	159.8621	6963595
6.59	164.3726	7160069
6.69	168.1272	7323622
6.79	171.3012	7461879
6.89	173.9678	7578038
6.99	176.4463	7685999
7.09	178.6842	7783486
7.19	180.4551	7860625
7.29	181.9620	7926267
7.39	183.2090	7980584
7.49	184.2953	8027903
7.59	185.2370	8068923
7.69	186.0668	8105068
7.79	186.7502	8134839
7.89	187.3768	8162135
7.99	187.8566	8183032
8.09	188.2129	8198555
8.19	188.4729	8209879
8.29	188.6864	8219177
8.39	188.8671	8227051
8.49	189.0014	8232901
8.59	189.0984	8237125
8.69	189.1770	8240550
8.79	189.2608	8244199
8.89	189.3210	8246824
8.99	189.3939	8249998
9.09	189.4794	8253723
9.19	189.5454	8256597
9.29	189.6194	8259822
9.39	189.7003	8263347
9.49	189.7457	8265321
9.59	189.7916	8267321
9.69	189.8495	8269846
9.79	189.9132	8272620
9.89	189.9695	8275070
9.99	190.0211	8277320
10.09	190.0693	8279419
10.19	190.1187	8281569
10.29	190.1738	8283969
10.39	190.2277	8286319
10.49	190.3166	8290193
10.59	190.3976	8293718

Stage [ft]	Area [ac]	Area [ft2]
10.69	190.4871	8297617
10.79	190.5680	8301142
10.89	190.6311	8303891
10.99	190.6983	8306816
11.09	190.7654	8309740
11.19	190.8429	8313115
11.29	190.9094	8316015
11.39	190.9892	8319489
11.49	191.0690	8322964
11.59	191.1533	8326638
11.69	191.2526	8330963
11.79	191.2583	8331212
11.89	191.2583	8331212

Comment:

Node: B-21

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	0.0011	50
-0.30	0.0015	67
-0.20	0.0020	88
-0.10	0.0024	103
0.00	0.0026	115
0.09	0.0029	125
0.20	0.0037	161
0.30	0.0044	191
0.40	0.0047	203
0.50	0.0048	207
0.60	0.0048	211
0.70	0.0049	215
0.80	0.0050	220
0.90	0.0051	224
1.00	0.0059	256
1.10	0.0064	280
1.20	0.0068	295
1.30	0.0075	327
1.40	0.0077	335
1.50	0.0079	343
1.60	0.0080	351
1.70	0.0082	357

Stage [ft]	Area [ac]	Area [ft2]
1.80	0.0083	363
1.90	0.0085	369
2.00	0.0086	375
2.10	0.0089	390
2.20	0.0093	404
2.30	0.0096	419
2.40	0.0108	471
2.50	0.0113	494
2.60	0.0121	527
2.70	0.0122	530
2.80	0.0123	534
2.90	0.0123	537
3.00	0.0124	541
3.10	0.0125	544
3.20	0.0126	548
3.30	0.0128	557
3.40	0.0132	575
3.50	0.0141	615
3.60	0.0147	640
3.70	0.0151	658
3.80	0.0154	672
3.90	0.0156	679
4.00	0.0157	684
4.10	0.0158	689
4.20	0.0159	694
4.30	0.0160	699
4.40	0.0165	717
4.50	0.0179	779
4.60	0.0186	809
4.69	0.0189	825
4.80	0.0194	843
4.90	0.0202	880
5.00	0.0204	889
5.10	0.0206	899
5.20	0.0216	941
5.29	0.0224	975
5.40	0.0231	1007
5.50	0.0238	1037
5.60	0.0247	1075
5.70	0.0275	1200
5.79	0.0310	1350
5.89	0.0367	1600
5.99	0.0494	2150
6.09	0.0723	3150
6.19	0.0935	4074
6.29	0.1096	4774
6.39	0.1412	6149
6.49	0.1676	7299
6.59	0.2135	9299

Stage [ft]	Area [ac]	Area [ft2]
6.69	0.2749	11973
6.79	0.3294	14348
6.89	0.4017	17498
6.99	0.4889	21297
7.09	0.6220	27096
7.19	0.7649	33321
7.29	0.9313	40570
7.39	1.1425	49768
7.49	1.4076	61317
7.59	1.7783	77465
7.69	2.2655	98687
7.79	2.7998	121959
7.89	3.2416	141206
7.99	3.6244	157879
8.09	4.0204	175127
8.19	4.6309	201723
8.29	5.0607	220446
8.39	5.5112	240068
8.49	5.9238	258041
8.59	6.3226	275413
8.69	6.7696	294886
8.79	7.2017	313708
8.89	7.6511	333280
8.99	8.1830	356452
9.09	8.7626	381699
9.19	9.3927	409145
9.29	9.9987	435542
9.39	10.5421	459214
9.49	11.0207	480061
9.59	11.4189	497409
9.69	11.7185	510457
9.79	11.9606	521005
9.89	12.1322	528479
9.99	12.2740	534654
10.09	12.4352	541678
10.19	12.5890	548377
10.29	12.7302	554526
10.39	12.8524	559850
10.49	12.9413	563725
10.59	13.0027	566399
10.69	13.0498	568449
10.79	13.0762	569599
10.89	13.0871	570074
10.99	13.0916	570268
11.09	13.0916	570268

Comment:

Node: B-22

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.26 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.26	0.0006	25
3.30	0.0023	100
3.40	0.0043	187
3.50	0.0103	450
3.60	0.0241	1050
3.70	0.0637	2775
3.80	0.0987	4299
3.90	0.1199	5224
4.00	0.1475	6424
4.10	0.1716	7474
4.20	0.1934	8424
4.30	0.2117	9224
4.39	0.2267	9874
4.50	0.2389	10407
4.60	0.2445	10649
4.69	0.2525	10999
4.79	0.2617	11398
4.89	0.2686	11698
4.99	0.2732	11898
5.09	0.2800	12198
5.19	0.2875	12523
5.29	0.2944	12823
5.39	0.3036	13223
5.49	0.3214	13998
5.59	0.3449	15023
5.69	0.3873	16873
5.79	0.4660	20297
5.89	0.6031	26271
5.99	0.8355	36395
6.09	1.1936	51993
6.19	1.6429	71565
6.29	2.2064	96112
6.39	2.8859	125708
6.49	3.7088	161553
6.59	4.6418	202198
6.69	5.5531	241893
6.79	6.3903	278363
6.89	7.1845	312958
6.99	7.8674	342704
7.09	8.4533	368226
7.19	9.0042	392223
7.29	9.4902	413395

Stage [ft]	Area [ac]	Area [ft2]
7.39	9.9723	434392
7.49	10.4222	453989
7.59	10.8204	471337
7.69	11.1859	487260
7.79	11.5647	503758
7.89	11.9572	520855
7.99	12.3618	538478
8.09	12.8048	557776
8.19	13.2604	577623
8.29	13.7401	598520
8.39	14.2549	620942
8.49	14.8270	645864
8.59	15.4003	670835
8.69	16.0097	697382
8.79	16.6369	724703
8.89	17.2939	753324
8.99	18.0422	785920
9.09	18.7550	816966
9.19	19.4533	847387
9.29	20.1368	877158
9.39	20.7617	904379
9.49	21.3459	929826
9.59	21.9335	955422
9.69	22.5727	983269
9.79	23.1621	1008940
9.89	23.7331	1033812
9.99	24.2122	1054684
10.09	24.6558	1074007
10.19	25.0431	1090879
10.29	25.3897	1105977
10.39	25.6744	1118376
10.49	25.9160	1128899
10.59	26.0910	1136523
10.69	26.2321	1142672
10.79	26.3102	1146072
10.89	26.3825	1149222
10.99	26.4382	1151646
11.09	26.4829	1153596
11.19	26.5133	1154921
11.29	26.5278	1155551
11.39	26.5278	1155551

Comment:

Node: B-23

Scenario: Future

Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.01 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.01	0.0006	25
5.10	0.0026	112
5.20	0.0132	575
5.30	0.0390	1700
5.40	0.0666	2900
5.49	0.0970	4224
5.59	0.1360	5924
5.69	0.2026	8824
5.79	0.2932	12773
5.89	0.3845	16748
5.99	0.5021	21872
6.09	0.6840	29796
6.19	0.9675	42144
6.29	1.3009	56667
6.39	1.7313	75415
6.49	2.1295	92763
6.59	2.5111	109385
6.69	2.8755	125258
6.79	3.2032	139531
6.89	3.5091	152855
6.99	3.8379	167178
7.09	4.1988	182901
7.19	4.6298	201673
7.29	5.0854	221520
7.39	5.5284	240818
7.49	5.9479	259090
7.59	6.3358	275988
7.69	6.7077	292186
7.79	7.0824	308509
7.89	7.5013	326756
7.99	7.8554	342179
8.09	8.1905	356777
8.19	8.4619	368601
8.29	8.7276	380174
8.39	8.9468	389723
8.49	9.1700	399447
8.59	9.3732	408295
8.69	9.5838	417469
8.79	9.8546	429268
8.89	10.0859	439341
8.99	10.2626	447040
9.09	10.3940	452765
9.19	10.4750	456289
9.29	10.5553	459789

Stage [ft]	Area [ac]	Area [ft2]
9.39	10.6104	462188
9.49	10.6586	464288
9.59	10.7045	466288
9.69	10.7670	469012
9.79	10.8634	473212
9.89	10.9277	476011
9.99	10.9851	478511
10.09	11.0017	479236
10.19	11.0098	479586
10.30	11.0110	479638
10.40	11.0110	479638

Comment:

Node: B-24

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0009	39
4.30	0.0023	100
4.39	0.0052	225
4.49	0.0189	825
4.59	0.0367	1600
4.69	0.0821	3575
4.79	0.1446	6299
4.89	0.2990	13023
4.99	0.7529	32796
5.09	1.5723	68491
5.19	2.5329	110335
5.29	3.4155	148780
5.39	4.2792	186400
5.49	5.3580	233394
5.59	6.7203	292736
5.69	8.5950	374400
5.79	10.9507	477011
5.89	13.4549	586097
5.99	15.5139	675785
6.09	17.0822	744101
6.19	18.2563	795244
6.29	19.0602	830264
6.39	19.7070	858435

Stage [ft]	Area [ac]	Area [ft2]
6.49	20.2424	881757
6.59	20.7009	901730
6.69	21.1594	921702
6.79	21.6081	941249
6.89	22.2038	967196
6.99	22.9079	997867
7.09	23.6625	1030737
7.19	24.3545	1060883
7.29	25.0713	1092104
7.39	25.8569	1126325
7.49	26.7394	1164769
7.59	27.5795	1201365
7.69	28.5585	1244009
7.79	29.7269	1294902
7.89	30.9497	1348170
7.99	32.0331	1395364
8.09	33.0930	1441533
8.19	33.9762	1480002
8.29	34.9150	1520897
8.39	35.9462	1565816
8.49	37.2081	1620784
8.59	38.6157	1682100
8.69	40.1789	1750191
8.79	41.6129	1812658
8.89	42.7279	1861226
8.99	43.5404	1896622
9.09	44.0896	1920544
9.19	44.5194	1939266
9.29	44.8551	1953889
9.39	45.1288	1965812
9.49	45.3389	1974961
9.59	45.5150	1982635
9.69	45.6287	1987585
9.79	45.7526	1992984
9.89	45.8416	1996858
9.99	45.8835	1998683
10.09	45.8989	1999358
10.19	45.9133	1999983
10.29	45.9183	2000199
10.39	45.9183	2000199

Comment:

Node: B-25

Scenario: Future
Type: Stage/Area

Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0011	50
4.30	0.0040	175
4.40	0.0099	433
4.50	0.0126	550
4.59	0.0184	800
4.70	0.0218	950
4.80	0.0252	1100
4.90	0.0330	1437
4.99	0.0407	1775
5.09	0.0476	2075
5.19	0.0580	2525
5.29	0.0706	3075
5.39	0.1067	4649
5.49	0.1739	7574
5.59	0.2502	10899
5.69	0.3632	15823
5.79	0.4797	20897
5.89	0.5957	25947
5.99	0.6898	30046
6.09	0.8160	35545
6.19	0.9491	41344
6.29	1.1035	48069
6.39	1.2378	53918
6.49	1.4002	60992
6.59	1.5729	68516
6.69	1.7531	76365
6.79	1.8983	82689
6.89	2.0314	88488
6.99	2.1215	92413
7.09	2.2093	96237
7.19	2.3281	101411
7.29	2.4526	106836
7.39	2.6030	113385
7.49	2.7774	120984
7.59	2.9851	130033
7.69	3.1745	138282
7.79	3.3426	145606
7.89	3.5188	153280
7.99	3.6577	159329
8.09	3.7661	164053
8.19	3.8694	168553
8.29	3.9544	172252
8.39	4.0163	174952
8.49	4.0248	175319

Stage [ft]	Area [ac]	Area [ft2]
8.59	4.0248	175319

Comment:

Node: B-26

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.60	0.0011	50
2.70	0.0044	190
2.80	0.0080	350
2.90	0.0143	625
3.00	0.0228	994
3.10	0.0362	1575
3.20	0.0459	2000
3.30	0.0608	2650
3.40	0.0861	3750
3.50	0.1125	4899
3.60	0.1567	6824
3.70	0.2083	9074
3.80	0.2565	11173
3.90	0.3225	14048
4.00	0.4269	18598
4.10	0.5492	23922
4.20	0.6703	29196
4.30	0.8011	34895
4.40	0.9308	40545
4.50	1.0708	46644
4.60	1.1902	51843
4.70	1.3434	58517
4.80	1.5413	67141
4.90	1.7629	76790
5.00	2.0056	87363
5.10	2.2655	98687
5.20	2.5226	109885
5.30	2.7728	120784
5.40	2.9846	130008
5.50	3.2095	139806
5.60	3.4614	150780
5.70	3.7036	161328
5.80	3.9664	172777
5.90	4.2516	185200

Stage [ft]	Area [ac]	Area [ft2]
6.00	4.5167	196749
6.10	4.7715	207847
6.20	5.0085	218171
6.30	5.2501	228694
6.40	5.4750	238493
6.50	5.6948	248067
6.60	5.8779	256041
6.70	6.1160	266414
6.80	6.3553	276838
6.90	6.6296	288786
7.00	6.8620	298910
7.10	7.1271	310459
7.20	7.4020	322432
7.30	7.6304	332381
7.40	7.8548	342154
7.50	8.0585	351028
7.60	8.2720	360327
7.70	8.4631	368651
7.80	8.6323	376025
7.90	8.7867	382749
8.00	8.9187	388498
8.10	9.0421	393872
8.20	9.1442	398322
8.30	9.2395	402471
8.40	9.3301	406421
8.50	9.4065	409745
8.60	9.4707	412545
8.70	9.5207	414720
8.80	9.5723	416969
8.90	9.6308	419519
9.00	9.6779	421569
9.10	9.7261	423668
9.20	9.7577	425043
9.30	9.7918	426533
9.40	9.7918	426533

Comment:

Node: B-27

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.92 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.92	0.0006	25
4.00	0.0017	75
4.09	0.0086	375
4.19	0.0189	825
4.29	0.0362	1575
4.39	0.0677	2950
4.49	0.1085	4724
4.59	0.1555	6774
4.69	0.2049	8924
4.79	0.2519	10974
4.89	0.2944	12823
4.99	0.3391	14773
5.09	0.3793	16523
5.19	0.4390	19122
5.29	0.5170	22522
5.39	0.6261	27271
5.49	0.7494	32646
5.59	0.8545	37220
5.69	0.9796	42669
5.79	1.1190	48744
5.89	1.2550	54668
5.99	1.3767	59967
6.09	1.4725	64141
6.19	1.5586	67891
6.29	1.6596	72290
6.39	1.7227	75040
6.49	1.7505	76250
6.59	1.7505	76250

Comment:

Node: B-28

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.87 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.87	0.0006	25
3.90	0.0008	36
4.00	0.0029	125
4.09	0.0069	300
4.19	0.0235	1025
4.29	0.0534	2325
4.39	0.0809	3525

Stage [ft]	Area [ac]	Area [ft2]
4.49	0.1222	5324
4.59	0.1481	6449
4.69	0.1888	8224
4.79	0.2238	9749
4.89	0.2622	11423
4.99	0.3082	13423
5.09	0.3472	15123
5.19	0.3937	17148
5.29	0.4321	18822
5.39	0.4740	20647
5.49	0.5182	22572
5.59	0.5538	24122
5.69	0.5997	26121
5.79	0.6576	28646
5.89	0.7368	32096
5.99	0.8568	37320
6.09	1.0323	44969
6.19	1.2458	54268
6.29	1.4455	62967
6.39	1.6263	70841
6.49	1.7583	76590
6.59	1.8529	80714
6.69	1.8736	81613
6.79	1.8736	81613

Comment:

Node: B-29

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.31 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.31	0.0006	25
4.40	0.0027	117
4.50	0.0075	325
4.60	0.0216	942
4.69	0.0344	1500
4.79	0.0471	2050
4.89	0.0608	2650
4.99	0.0775	3375
5.09	0.1102	4799
5.19	0.1521	6624
5.29	0.2031	8849

Stage [ft]	Area [ac]	Area [ft2]
5.39	0.2628	11448
5.49	0.3156	13748
5.59	0.3759	16373
5.69	0.4419	19247
5.79	0.4987	21722
5.89	0.5417	23597
5.99	0.5893	25672
6.09	0.6496	28296
6.19	0.7024	30596
6.29	0.7701	33546
6.39	0.8734	38045
6.49	0.9629	41944
6.59	1.0760	46869
6.69	1.2200	53143
6.79	1.3571	59117
6.89	1.5023	65441
6.99	1.6355	71241
7.09	1.7554	76465
7.19	1.8352	79939
7.29	1.8799	81889
7.39	1.9052	82989
7.50	1.9187	83579
7.60	1.9187	83579

Comment:

Node: B-3

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.60 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
0.50	0.0000	0
1.00	3.8700	168577
1.50	7.8300	341075
2.00	11.8700	517057
2.50	16.0000	696960
3.00	20.2200	880783
3.40	23.6600	1030630
3.90	28.0300	1220987
4.40	37.4400	1630886
4.90	52.8000	2299968
5.40	70.0800	3052685

Stage [ft]	Area [ac]	Area [ft2]
5.90	89.2800	3889037
6.40	110.3900	4808588
6.90	132.4700	5770393

Comment:

Node: B-30

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.06 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.06	0.0006	25
4.10	0.0013	57
4.20	0.0039	169
4.30	0.0063	275
4.39	0.0103	450
4.49	0.0172	750
4.60	0.0281	1225
4.69	0.0396	1725
4.79	0.0539	2350
4.89	0.0786	3425
4.99	0.1383	6024
5.09	0.2163	9424
5.19	0.3001	13073
5.29	0.4005	17448
5.39	0.5515	24022
5.49	0.7282	31721
5.59	0.9750	42469
5.69	1.2498	54443
5.79	1.6108	70166
5.89	2.0538	89463
5.99	2.6988	117559
6.09	3.3926	147780
6.19	3.9521	172152
6.29	4.4255	192774
6.39	4.8926	213122
6.49	5.3247	231944
6.59	5.6931	247992
6.69	5.9932	261065
6.79	6.2601	272689
6.89	6.4999	283137
6.99	6.6784	290911
7.09	6.8098	296635

Stage [ft]	Area [ac]	Area [ft2]
7.19	6.9165	301285
7.29	6.9883	304409
7.39	7.0193	305759
7.50	7.0319	306309
7.59	7.0457	306909
7.69	7.0514	307159
7.80	7.0532	307238
7.90	7.0532	307238

Comment:

Node: B-31

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.05	2.5341	110385
0.10	2.5375	110535
0.20	2.5395	110623
0.30	2.5427	110760
0.40	2.5467	110935
0.50	2.5489	111030
0.60	2.5548	111285
0.70	2.5597	111502
0.80	2.5632	111653
0.90	2.5674	111835
1.00	2.5706	111977
1.10	2.5743	112135
1.20	2.5812	112435
1.30	2.5869	112685
1.40	2.5915	112885
1.50	2.5961	113085
1.60	2.6012	113310
1.70	2.6053	113485
1.80	2.6100	113693
1.90	2.6130	113820
2.00	2.6156	113935
2.10	2.6210	114172
2.20	2.6290	114518
2.30	2.6328	114685
2.40	2.6365	114847
2.50	2.6407	115028
2.60	2.6471	115310

Stage [ft]	Area [ac]	Area [ft2]
2.70	2.6556	115676
2.80	2.6601	115872
2.90	2.6695	116284
3.00	2.6758	116559
3.10	2.6821	116834
3.20	2.6879	117084
3.30	2.6976	117509
3.40	2.7080	117959
3.50	2.7180	118397
3.60	2.7286	118859
3.70	2.7499	119784
3.80	2.7682	120584
3.90	2.7831	121234
4.00	2.8084	122334
4.10	2.8273	123159
4.20	2.8457	123958
4.30	2.8732	125158
4.40	2.9002	126333
4.50	2.9306	127658
4.59	2.9668	129233
4.69	3.0201	131557
4.79	3.0706	133757
4.89	3.1424	136882
4.99	3.2428	141256
5.09	3.3358	145306
5.19	3.4362	149680
5.29	3.5492	154604
5.39	3.6801	160304
5.49	3.7960	165353
5.59	3.9297	171177
5.69	4.0525	176526
5.79	4.1896	182501
5.89	4.3526	189600
5.99	4.5500	198199
6.09	4.7377	206372
6.19	4.8995	213422
6.29	5.0693	220820
6.39	5.2403	228270
6.49	5.4234	236243
6.59	5.6007	243967
6.69	5.7717	251416
6.79	5.9290	258265
6.89	6.0931	265415
6.99	6.2515	272314
7.09	6.4041	278963
7.19	6.5487	285262
7.29	6.7197	292711
7.39	6.9079	300910
7.49	7.1644	312083

Stage [ft]	Area [ac]	Area [ft2]
7.59	7.5036	326856
7.69	7.9225	345104
7.79	8.4040	366076
7.89	8.8762	386648
7.99	9.3278	406321
8.09	9.7100	422969
8.19	10.1031	440091
8.29	10.5002	457389
8.39	10.8537	472787
8.49	11.1676	486460
8.59	11.4052	496809
8.69	11.4924	500610
8.79	11.4924	500610

Comment:

Node: B-32

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0006	25
3.10	0.0063	275
3.21	0.0171	746
3.31	0.0267	1164
3.40	0.0344	1500
3.50	0.0689	3000
3.60	0.1222	5324
3.70	0.2077	9049
3.80	0.3001	13073
3.90	0.4005	17448
4.00	0.4792	20872
4.10	0.5693	24797
4.20	0.6565	28596
4.30	0.7431	32371
4.40	0.8464	36870
4.50	0.9641	41994
4.60	1.0656	46419
4.70	1.1580	50443
4.80	1.2699	55318
4.90	1.3801	60117
5.00	1.5218	66291
5.10	1.6756	72990

Stage [ft]	Area [ac]	Area [ft2]
5.20	1.8443	80339
5.30	2.0119	87638
5.40	2.1599	94087
5.50	2.3120	100712
5.60	2.4882	108386
5.70	2.7028	117734
5.80	3.0121	131207
5.90	3.4293	149380
6.00	3.8000	165528
6.10	4.1363	180176
6.20	4.4823	195249
6.30	4.8237	210122
6.40	5.1583	224695
6.50	5.5370	241193
6.60	5.9347	258515
6.70	6.4064	279063
6.80	6.9579	303085
6.90	7.6138	331656
7.00	8.3007	361577
7.10	8.9457	389673
7.20	9.5660	416694
7.30	10.1938	444041
7.40	10.8399	472187
7.50	11.4998	500933
7.60	12.2774	534804
7.70	13.2030	575123
7.80	14.1567	616668
7.90	15.1449	659712
8.00	16.2082	706031
8.10	17.3410	755374
8.20	18.4428	803368
8.30	19.4126	845612
8.40	20.2768	883257
8.50	21.0733	917952
8.60	21.8107	950073
8.70	22.5377	981744
8.80	23.1162	1006941
8.90	23.5598	1026263
9.00	23.8031	1036862
9.10	23.9620	1043786
9.20	24.0515	1047685
9.30	24.1187	1050610
9.40	24.1726	1052959
9.50	24.2329	1055584
9.60	24.2834	1057784
9.70	24.3270	1059684
9.80	24.3643	1061308
9.90	24.4010	1062908
10.00	24.4412	1064658

Stage [ft]	Area [ac]	Area [ft2]
10.10	24.4791	1066308
10.20	24.5164	1067932
10.30	24.5571	1069707
10.40	24.5915	1071207
10.50	24.6196	1072432
10.60	24.6437	1073481
10.70	24.6437	1073481

Comment:

Node: B-33

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.44 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.44	0.0006	25
4.50	0.0015	64
4.59	0.0046	200
4.69	0.0115	500
4.79	0.0218	950
4.89	0.0390	1700
4.99	0.0780	3400
5.09	0.1613	7024
5.19	0.3064	13348
5.29	0.5406	23547
5.39	0.8923	38870
5.49	1.3284	57867
5.59	1.8352	79939
5.69	2.2386	97512
5.79	2.6403	115010
5.89	3.0213	131607
5.99	3.3570	146230
6.09	3.6261	157954
6.19	3.8671	168452
6.29	4.0789	177676
6.39	4.3101	187750
6.49	4.5552	198424
6.59	4.8341	210572
6.69	5.1009	222195
6.79	5.3270	232044
6.89	5.4997	239568
6.99	5.6661	246817
7.09	5.8148	253291

Stage [ft]	Area [ac]	Area [ft2]
7.19	5.9479	259090
7.29	6.0673	264290
7.39	6.1843	269389
7.49	6.2727	273239
7.59	6.3616	277113
7.69	6.4236	279813
7.79	6.4477	280863
7.89	6.4644	281587
8.00	6.4705	281856
8.10	6.4705	281856

Comment:

Node: B-34

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.78 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.78	0.0006	25
4.80	0.0007	31
4.90	0.0013	56
5.00	0.0019	81
5.10	0.0027	119
5.20	0.0035	154
5.30	0.0043	189
5.40	0.0055	242
5.49	0.0080	350
5.60	0.0112	487
5.70	0.0149	650
5.79	0.0207	900
5.89	0.0281	1225
5.99	0.0350	1525
6.09	0.0465	2025
6.19	0.0625	2725
6.29	0.0872	3799
6.40	0.1171	5099
6.49	0.1521	6624
6.59	0.2181	9499
6.69	0.2973	12948
6.79	0.4023	17523
6.89	0.5388	23472
6.99	0.7219	31446
7.09	0.9589	41769

Stage [ft]	Area [ac]	Area [ft2]
7.19	1.2240	53318
7.29	1.4977	65241
7.39	1.7726	77215
7.49	2.0676	90063
7.59	2.3287	101436
7.69	2.5892	112785
7.79	2.8216	122909
7.89	3.0592	133257
7.99	3.2772	142756
8.09	3.5349	153979
8.19	3.8402	167278
8.29	4.2464	184975
8.39	4.7222	205698
8.49	5.2903	230444
8.59	5.9387	258690
8.69	6.6354	289036
8.79	6.9998	304909
8.89	7.1868	313058
8.99	7.3079	318332
9.09	7.3756	321282
9.19	7.4141	322957
9.29	7.4238	323382
9.40	7.4282	323571
9.50	7.4282	323571

Comment:

Node: B-35

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.58	0.0006	25
5.60	0.0006	28
5.70	0.0010	43
5.80	0.0016	71
5.90	0.0022	94
6.00	0.0026	115
6.10	0.0036	158
6.19	0.0040	175
6.29	0.0080	350
6.39	0.0161	700
6.49	0.0344	1500

Stage [ft]	Area [ac]	Area [ft2]
6.59	0.0666	2900
6.69	0.1027	4474
6.79	0.1704	7424
6.89	0.2743	11948
6.99	0.4539	19772
7.09	0.7024	30596
7.19	1.0610	46219
7.29	1.4742	64216
7.39	1.8966	82614
7.49	2.4193	105386
7.59	3.0764	134007
7.69	3.8792	168977
7.79	4.8702	212147
7.89	5.9944	261115
7.99	7.2689	316633
8.09	8.4281	367126
8.19	9.4879	413295
8.29	10.4233	454039
8.39	11.2049	488085
8.49	11.9142	518981
8.59	12.5351	546027
8.69	13.0762	569599
8.79	13.5571	590546
8.89	14.0466	611868
8.99	14.5510	633840
9.09	15.0875	657212
9.19	15.7296	685184
9.29	16.7224	728428
9.39	17.5017	762373
9.49	17.8976	779621
9.59	18.1846	792119
9.69	18.3607	799793
9.79	18.4795	804967
9.89	18.5644	808667
9.99	18.6293	811492
10.09	18.6597	812816
10.19	18.6827	813816
10.29	18.6913	814191
10.40	18.6993	814541
10.49	18.7022	814666
10.60	18.7062	814841
10.70	18.7071	814883
10.80	18.7096	814991
10.90	18.7100	815006
11.00	18.7100	815006

Comment:

Node: B-36

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.94	0.0006	25
1.00	0.0011	50
1.10	0.0016	71
1.20	0.0041	180
1.30	0.0109	475
1.40	0.0157	683
1.50	0.0197	858
1.60	0.0250	1087
1.70	0.0293	1275
1.80	0.0339	1475
1.90	0.0407	1775
2.00	0.0488	2125
2.10	0.0614	2675
2.20	0.0729	3175
2.30	0.0835	3637
2.40	0.0935	4074
2.50	0.1010	4399
2.60	0.1044	4549
2.70	0.1096	4774
2.80	0.1136	4949
2.90	0.1166	5079
3.00	0.1199	5224
3.10	0.1245	5424
3.20	0.1262	5499
3.30	0.1328	5784
3.40	0.1360	5924
3.50	0.1377	5999
3.60	0.1417	6174
3.70	0.1475	6424
3.80	0.1547	6737
3.90	0.1584	6899
4.00	0.1611	7016
4.10	0.1681	7324
4.20	0.1773	7724
4.30	0.2003	8724
4.40	0.2290	9974
4.50	0.2668	11623
4.60	0.3145	13698
4.70	0.3489	15198
4.80	0.3845	16748
4.89	0.4132	17998
4.99	0.4436	19322

Stage [ft]	Area [ac]	Area [ft2]
5.09	0.4792	20872
5.19	0.5245	22847
5.29	0.5670	24697
5.39	0.5985	26072
5.49	0.6289	27396
5.59	0.6674	29071
5.69	0.7047	30696
5.79	0.7454	32471
5.89	0.7942	34595
5.99	0.8481	36945
6.09	0.9004	39220
6.19	0.9595	41794
6.29	1.0278	44769
6.39	1.1150	48569
6.49	1.2275	53468
6.59	1.3916	60617
6.69	1.6601	72315
6.79	2.1255	92588
6.89	2.7900	121534
6.99	3.5745	155704
7.09	4.5919	200023
7.19	5.6834	247567
7.29	6.8861	299960
7.39	8.1078	353178
7.49	9.4019	409545
7.59	10.8933	474512
7.69	12.5953	548652
7.79	14.2801	622042
7.89	15.9942	696707
7.99	17.6302	767972
8.09	19.3420	842537
8.19	21.1123	919652
8.29	22.9348	999042
8.39	24.7947	1080056
8.49	26.5885	1158195
8.59	28.4328	1238535
8.69	30.5475	1330647
8.79	32.8710	1431859
8.89	35.1365	1530546
8.99	37.3722	1627933
9.09	39.3479	1713996
9.19	41.0132	1786536
9.29	42.3004	1842604
9.39	43.3212	1887073
9.49	44.1786	1924418
9.59	44.8511	1953714
9.69	45.5340	1983460
9.79	46.0900	2007682
9.89	46.5755	2028829

Stage [ft]	Area [ac]	Area [ft2]
9.99	47.0415	2049126
10.09	47.4282	2065974
10.19	47.7295	2079097
10.29	48.0227	2091871
10.39	48.2425	2101444
10.49	48.4078	2108643
10.59	48.5782	2116067
10.69	48.7148	2122017
10.79	48.8399	2127466
10.89	48.9621	2132790
10.99	49.0511	2136665
11.09	49.1222	2139764
11.19	49.1905	2142739
11.29	49.2439	2145064
11.39	49.2772	2146513
11.49	49.3127	2148063
11.59	49.3500	2149688
11.69	49.3747	2150763
11.79	49.3879	2151338
11.89	49.4040	2152038
11.99	49.4235	2152888
12.09	49.4407	2153637
12.19	49.4505	2154062
12.29	49.4574	2154362
12.39	49.4631	2154612
12.49	49.4688	2154862
12.59	49.4728	2155037
12.70	49.4750	2155131
12.80	49.4772	2155229
12.90	49.4797	2155337
12.99	49.4815	2155412
13.09	49.4832	2155487
13.20	49.4845	2155543
13.30	49.4851	2155572
13.40	49.4859	2155607
13.50	49.4870	2155654
13.60	49.4883	2155712
13.69	49.4889	2155737
13.80	49.4898	2155776
13.90	49.4904	2155802
14.00	49.4932	2155924
14.10	49.4932	2155924

Comment:

Node: B-37

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.85 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.85	0.0006	25
5.90	0.0007	29
6.00	0.0008	37
6.10	0.0010	45
6.20	0.0013	56
6.29	0.0017	75
6.39	0.0069	300
6.49	0.0344	1500
6.59	0.0763	3325
6.69	0.1343	5849
6.79	0.2186	9524
6.89	0.3701	16123
6.99	0.5601	24397
7.09	0.7902	34420
7.19	1.0438	45469
7.29	1.3003	56642
7.39	1.6073	70016
7.49	1.9763	86088
7.59	2.3671	103111
7.69	2.7866	121384
7.79	3.2250	140481
7.89	3.5860	156204
7.99	3.8884	169377
8.09	4.2040	183126
8.19	4.5248	197099
8.29	4.9224	214421
8.39	5.3040	231044
8.49	5.6725	247092
8.59	6.0380	263015
8.69	6.3559	276863
8.79	7.2511	315858
8.89	7.6287	332306
8.99	7.8163	340480
9.09	7.9305	345454
9.19	8.0011	348528
9.29	8.0700	351528
9.39	8.1251	353928
9.49	8.1405	354602
9.59	8.1405	354602

Comment:

Node: B-38

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.80	0.0006	25
1.90	0.0029	125
2.00	0.0098	425
2.10	0.0321	1400
2.20	0.0947	4124
2.30	0.1785	7774
2.40	0.2720	11848
2.50	0.3449	15023
2.60	0.3977	17323
2.70	0.4350	18947
2.80	0.4717	20547
2.90	0.4987	21722
3.00	0.5342	23272
3.10	0.5566	24247
3.20	0.5710	24872
3.30	0.5830	25397
3.40	0.5899	25697
3.51	0.5962	25972
3.60	0.6043	26321
3.71	0.6134	26721
3.80	0.6249	27221
3.90	0.6352	27671
4.01	0.6450	28096
4.10	0.6513	28371
4.21	0.6589	28701
4.31	0.6657	28996
4.41	0.6720	29271
4.50	0.6777	29521
4.61	0.6834	29771
4.70	0.6903	30071
4.80	0.6995	30471
4.90	0.7093	30896
5.00	0.7185	31296
5.10	0.7299	31796
5.20	0.7403	32246
5.30	0.7546	32871
5.40	0.7684	33471
5.50	0.7810	34020
5.60	0.7948	34620
5.70	0.8114	35345
5.80	0.8349	36370
5.90	0.8631	37595

Stage [ft]	Area [ac]	Area [ft2]
6.00	0.8929	38895
6.10	0.9216	40145
6.20	0.9468	41244
6.30	0.9761	42519
6.40	0.9996	43544
6.50	1.0410	45344
6.60	1.0897	47469
6.70	1.1563	50368
6.80	1.2447	54218
6.90	1.3646	59442
7.00	1.5339	66816
7.10	1.7623	76765
7.20	2.0320	88513
7.30	2.3637	102961
7.40	2.7126	118159
7.50	3.1252	136132
7.60	3.6055	157054
7.70	4.1317	179976
7.80	4.6734	203573
7.90	5.2294	227795
8.00	5.7981	252566
8.10	6.3909	278388
8.20	7.0933	308984
8.30	7.8324	341179
8.40	8.5428	372125
8.50	9.2177	401521
8.60	9.9315	432617
8.70	10.7200	466963
8.80	11.6083	505657
8.90	12.5930	548552
9.00	13.6541	594771
9.10	14.8023	644789
9.20	15.9948	696732
9.30	17.2492	751375
9.40	18.3952	801293
9.50	19.6444	855711
9.60	20.9097	910828
9.70	22.2307	968371
9.80	23.4611	1021964
9.90	24.6426	1073432
10.00	25.7949	1123625
10.10	26.7589	1165619
10.20	27.4481	1195640
10.30	28.1006	1224062
10.40	28.7169	1250908
10.50	29.3860	1280054
10.60	29.8646	1300901
10.70	30.1641	1313950
10.80	30.3793	1323323

Stage [ft]	Area [ac]	Area [ft2]
10.90	30.5469	1330622
11.00	30.6760	1336247
11.10	30.7845	1340971
11.20	30.8711	1344745
11.30	30.9285	1347245
11.40	30.9698	1349045
11.50	31.0042	1350545
11.60	31.0306	1351695
11.70	31.0479	1352444
11.80	31.0679	1353319
11.90	31.0817	1353919
12.00	31.0915	1354344
12.11	31.0986	1354657
12.20	31.1035	1354869
12.30	31.1075	1355044
12.40	31.1093	1355119
12.51	31.1098	1355142
12.61	31.1104	1355169
12.71	31.1108	1355188
12.81	31.1118	1355230
12.91	31.1118	1355230

Comment:

Node: B-39

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.94 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.94	0.0006	25
4.00	0.0010	44
4.10	0.0015	64
4.20	0.0020	86
4.29	0.0046	200
4.39	0.0184	800
4.49	0.0425	1850
4.59	0.0780	3400
4.69	0.1228	5349
4.79	0.1699	7399
4.89	0.2422	10549
4.99	0.3225	14048
5.09	0.4155	18098
5.19	0.5417	23597

Stage [ft]	Area [ac]	Area [ft2]
5.29	0.6714	29246
5.39	0.8045	35045
5.49	0.9388	40895
5.59	1.0656	46419
5.69	1.1689	50918
5.79	1.2670	55193
5.89	1.3755	59917
5.99	1.4478	63067
6.09	1.5230	66341
6.19	1.5804	68841
6.29	1.6332	71140
6.39	1.6883	73540
6.49	1.7393	75765
6.59	1.7841	77715
6.69	1.8329	79839
6.79	1.8748	81664
6.89	1.9373	84389
6.99	2.0067	87413
7.09	2.0773	90488
7.19	2.1496	93637
7.29	2.2214	96762
7.39	2.2902	99762
7.49	2.3757	103486
7.59	2.4796	108011
7.69	2.5909	112860
7.79	2.6965	117459
7.89	2.8004	121984
7.99	2.9082	126683
8.09	3.0442	132607
8.19	3.1802	138532
8.29	3.3099	144181
8.39	3.4522	150380
8.49	3.5963	156654
8.59	3.7208	162078
8.69	3.8562	167978
8.79	4.0008	174277
8.89	4.1437	180501
8.99	4.2751	186225
9.09	4.3911	191274
9.19	4.4921	195674
9.29	4.5976	200273
9.39	4.7101	205173
9.49	4.8214	210022
9.59	4.9201	214321
9.69	5.0177	218571
9.79	5.1078	222495
9.89	5.1904	226095
9.99	5.2484	228619
10.09	5.3264	232019

Stage [ft]	Area [ac]	Area [ft2]
10.19	5.3798	234344
10.29	5.4320	236618
10.39	5.4647	238043
10.49	5.4911	239193
10.59	5.5175	240343
10.69	5.5502	241768
10.79	5.5841	243243
10.89	5.6174	244692
10.99	5.6484	246042
11.09	5.6828	247542
11.19	5.7120	248817
11.29	5.7499	250467
11.39	5.7832	251916
11.49	5.8176	253416
11.59	5.8498	254816
11.69	5.8808	256166
11.79	5.9089	257391
11.89	5.9433	258890
11.99	5.9777	260390
12.09	6.0116	261865
12.19	6.0455	263340
12.29	6.0741	264590
12.39	6.1046	265915
12.49	6.1344	267214
12.59	6.1671	268639
12.69	6.1998	270064
12.79	6.2331	271514
12.89	6.2647	272889
12.99	6.2974	274313
13.09	6.3255	275538
13.19	6.3593	277013
13.29	6.3915	278413
13.39	6.4196	279638
13.49	6.4558	281212
13.59	6.4908	282737
13.69	6.5229	284137
13.79	6.5567	285612
13.89	6.5889	287012
13.99	6.6296	288786
14.09	6.6623	290211
14.19	6.7128	292411
14.29	6.7570	294336
14.39	6.7909	295811
14.49	6.8259	297335
14.59	6.8683	299185
14.69	6.9102	301010
14.79	6.9366	302160
14.89	6.9693	303584
14.99	6.9940	304659

Stage [ft]	Area [ac]	Area [ft2]
15.09	7.0204	305809
15.19	7.0480	307009
15.29	7.0703	307984
15.39	7.0841	308584
15.49	7.0884	308772
15.59	7.0884	308772

Comment:

Node: B-4

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.24	0.0006	25
2.30	0.0012	54
2.40	0.0016	68
2.50	0.0023	100
2.60	0.0036	158
2.70	0.0051	221
2.80	0.0065	284
2.90	0.0081	354
3.00	0.0098	425
3.10	0.0138	600
3.20	0.0218	950
3.30	0.0284	1237
3.40	0.0350	1525
3.50	0.0453	1975
3.60	0.0637	2775
3.70	0.1021	4449
3.80	0.1492	6499
3.90	0.2324	10124
4.00	0.3208	13973
4.10	0.4304	18747
4.20	0.5595	24372
4.30	0.7185	31296
4.40	0.8963	39045
4.50	1.0897	47469
4.59	1.2745	55518
4.69	1.5345	66841
4.79	1.8197	79264
4.89	2.1422	93313
4.99	2.4939	108636

Stage [ft]	Area [ac]	Area [ft2]
5.09	2.9140	126933
5.19	3.4098	148530
5.29	4.0169	174977
5.39	4.6413	202173
5.49	5.4946	239343
5.59	6.2463	272089
5.69	7.1581	311808
5.79	8.1176	353603
5.89	8.9485	389798
5.99	9.7140	423143
6.09	10.5255	458489
6.19	11.3237	493259
6.29	12.1150	527730
6.39	12.9092	562325
6.49	13.7327	598195
6.59	14.6170	636715
6.69	15.6309	680884
6.79	16.6753	726378
6.89	17.7869	774797
6.99	19.1291	833264
7.09	20.4145	889256
7.19	21.5536	938875
7.29	22.5722	983244
7.39	23.6034	1028163
7.49	24.5261	1068357
7.59	25.2457	1099703
7.69	25.9303	1129524
7.79	26.6235	1159720
7.89	27.3563	1191641
7.99	28.1379	1225686
8.09	28.8271	1255707
8.19	29.3940	1280404
8.29	30.0184	1307600
8.39	30.7093	1337696
8.49	31.3572	1365918
8.59	31.9826	1393164
8.69	32.6265	1421210
8.79	33.1774	1445207
8.89	33.6479	1465704
8.99	34.0835	1484677
9.09	34.4674	1501400
9.19	34.7887	1515398
9.29	35.0980	1528871
9.39	35.3746	1540919
9.49	35.5399	1548118
9.59	35.5735	1549582
9.69	35.5735	1549582

Comment:

Node: B-40

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.90 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.90	0.0006	25
4.01	0.0007	32
4.11	0.0009	39
4.21	0.0011	46
4.30	0.0023	100
4.40	0.0109	475
4.50	0.0316	1375
4.60	0.0574	2500
4.70	0.1148	4999
4.80	0.1813	7899
4.90	0.2542	11074
5.00	0.3277	14273
5.10	0.4040	17598
5.20	0.4992	21747
5.30	0.6352	27671
5.40	0.8395	36570
5.50	1.2395	53993
5.60	1.8495	80564
5.70	2.6311	114610
5.80	3.3742	146980
5.90	4.0358	175802
6.00	4.6430	202248
6.10	5.2690	229519
6.20	5.9594	259590
6.30	6.6623	290211
6.40	7.3992	322307
6.50	8.3276	362752
6.60	9.5166	414545
6.70	10.8336	471912
6.80	12.3101	536228
6.90	13.8142	601745
7.00	15.1581	660287
7.10	16.2036	705831
7.20	17.0019	740601
7.30	17.5562	764748
7.40	17.9298	781021
7.50	18.1920	792444
7.60	18.4261	802643
7.70	18.6431	812092
7.80	18.8187	819741
7.90	18.9960	827464
8.00	19.1389	833689

Stage [ft]	Area [ac]	Area [ft2]
8.10	19.2226	837338
8.20	19.3001	840713
8.30	19.3632	843462
8.40	19.4183	845862
8.50	19.4301	846373
8.60	19.4301	846373

Comment: This basin doesn't belong in this Town's model.

Node: B-5

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.66	0.0011	50
2.70	0.0029	125
2.80	0.0075	325
2.90	0.0115	500
3.00	0.0218	950
3.10	0.0379	1650
3.20	0.0511	2225
3.30	0.0620	2700
3.40	0.0717	3125
3.50	0.0809	3525
3.60	0.0901	3924
3.70	0.0998	4349
3.80	0.1165	5074
3.90	0.1380	6012
4.00	0.1561	6799
4.10	0.1871	8149
4.20	0.2192	9549
4.30	0.2611	11373
4.39	0.3214	13998
4.49	0.3954	17223
4.59	0.4786	20847
4.69	0.5767	25122
4.79	0.6748	29396
4.89	0.7976	34745
4.99	0.9371	40820
5.09	1.0524	45844
5.19	1.1815	51468
5.29	1.3319	58017
5.39	1.5052	65566

Stage [ft]	Area [ac]	Area [ft2]
5.49	1.6888	73565
5.59	1.8989	82714
5.69	2.1358	93038
5.79	2.4365	106136
5.89	2.7717	120734
5.99	3.1780	138432
6.09	3.7386	162853
6.19	4.3916	191299
6.29	5.0475	219871
6.39	5.8171	253391
6.49	6.5103	283587
6.59	7.2006	313658
6.69	7.8783	343179
6.79	8.5153	370925
6.89	9.1253	397497
6.99	9.7100	422969
7.09	10.2282	445541
7.19	10.7297	467388
7.29	11.2261	489010
7.39	11.7793	513106
7.49	12.4077	540478
7.59	13.0934	570349
7.69	13.8010	601170
7.79	14.7289	641589
7.89	15.4158	671510
7.99	15.9420	694432
8.09	16.3833	713655
8.19	16.7718	730577
8.29	17.1229	745875
8.39	17.3909	757549
8.49	17.6681	769622
8.59	17.9338	781196
8.69	18.2041	792969
8.79	18.4795	804967
8.89	18.7653	817416
8.99	19.0918	831639
9.09	19.3982	844987
9.19	19.6909	857735
9.29	19.9554	869259
9.39	20.1752	878833
9.49	20.3887	888131
9.59	20.6842	901005
9.69	21.1295	920402
9.79	21.4784	935600
9.89	21.6529	943199
9.99	21.7028	945374
10.09	21.7344	946749
10.19	21.7539	947598
10.29	21.7705	948323

Stage [ft]	Area [ac]	Area [ft2]
10.39	21.7741	948481
10.49	21.7741	948481

Comment:

Node: B-6

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.28	0.0006	25
0.30	0.0007	29
0.40	0.0011	49
0.50	0.0016	69
0.60	0.0033	146
0.70	0.0046	200
0.80	0.0075	325
0.89	0.0132	575
1.00	0.0207	900
1.09	0.0310	1350
1.20	0.0511	2225
1.30	0.0683	2975
1.40	0.0844	3675
1.50	0.1044	4549
1.60	0.1182	5149
1.70	0.1337	5824
1.80	0.1526	6649
1.90	0.1796	7824
2.00	0.2158	9399
2.10	0.2611	11373
2.20	0.3294	14348
2.30	0.4155	18098
2.40	0.5239	22822
2.50	0.6347	27646
2.60	0.7712	33596
2.70	0.9164	39920
2.80	1.0576	46069
2.90	1.2171	53018
3.00	1.3692	59642
3.10	1.5482	67441
3.20	1.7410	75840
3.30	1.9436	84664
3.40	2.1622	94187

Stage [ft]	Area [ac]	Area [ft2]
3.50	2.3820	103761
3.60	2.6093	113660
3.70	2.8325	123384
3.80	3.0649	133507
3.90	3.2864	143156
4.00	3.5326	153879
4.10	3.7994	165503
4.20	4.0336	175702
4.30	4.2912	186925
4.40	4.5615	198698
4.50	4.8432	210972
4.59	5.0602	220421
4.69	5.3230	231869
4.79	5.5508	241793
4.89	5.7780	251691
4.99	6.0047	261565
5.09	6.2285	271314
5.19	6.4230	279788
5.29	6.6411	289286
5.39	6.8603	298835
5.49	7.0721	308059
5.59	7.2729	316808
5.69	7.5099	327131
5.79	7.7142	336030
5.89	7.9156	344804
5.99	8.1509	355053
6.09	8.4017	365976
6.19	8.6536	376950
6.29	8.9416	389498
6.39	9.2814	404296
6.49	9.6498	420344
6.59	10.0641	438391
6.69	10.4887	456889
6.79	10.9891	478686
6.89	11.5699	503983
6.99	12.2349	532954
7.09	13.0435	568174
7.19	13.7792	600220
7.29	14.5642	634415
7.39	15.3521	668736
7.49	16.1158	702006
7.59	16.8091	732202
7.69	17.5384	763973
7.79	18.3045	797344
7.89	19.1572	834489
7.99	20.0926	875233
8.09	21.0848	918452
8.19	22.0758	961622
8.29	23.1449	1008190

Stage [ft]	Area [ac]	Area [ft2]
8.39	24.2059	1054409
8.49	25.3955	1106227
8.59	26.5277	1155546
8.69	27.5394	1199615
8.79	28.4925	1241134
8.89	29.4399	1282404
8.99	30.5073	1328898
9.09	31.7565	1383315
9.19	32.9708	1436208
9.29	34.0565	1483502
9.39	34.9821	1523822
9.49	35.8154	1560117
9.59	36.4678	1588538
9.69	36.9935	1611435
9.79	37.4393	1630857
9.89	37.7968	1646430
9.99	38.1457	1661628
10.09	38.4711	1675801
10.19	38.7523	1688050
10.29	39.0111	1699323
10.39	39.2596	1710147
10.49	39.4966	1720470
10.59	39.7209	1730244
10.69	39.9356	1739593
10.79	40.1112	1747242
10.89	40.2741	1754341
10.99	40.4434	1761715
11.09	40.6379	1770189
11.19	40.8089	1777638
11.29	40.9868	1785387
11.39	41.1670	1793236
11.49	41.3082	1799385
11.59	41.4591	1805959
11.69	41.6204	1812983
11.79	41.7506	1818657
11.89	41.8992	1825131
11.99	42.0358	1831080
12.09	42.1621	1836580
12.19	42.2963	1842429
12.29	42.4151	1847603
12.39	42.5362	1852878
12.49	42.6504	1857852
12.59	42.7749	1863276
12.69	42.9023	1868825
12.79	43.0314	1874450
12.89	43.1560	1879874
12.99	43.2684	1884773
13.09	43.4039	1890673
13.19	43.5227	1895847

Stage [ft]	Area [ac]	Area [ft2]
13.29	43.6443	1901146
13.39	43.7597	1906170
13.49	43.8836	1911570
13.59	44.0007	1916669
13.69	44.1103	1921443
13.79	44.2227	1926343
13.89	44.3467	1931742
13.99	44.4666	1936966
14.09	44.5923	1942441
14.19	44.7157	1947815
14.29	44.8413	1953289
14.39	44.9584	1958388
14.49	45.0893	1964088
14.59	45.2057	1969162
14.69	45.3291	1974536
14.79	45.4370	1979236
14.89	45.5409	1983760
14.99	45.6264	1987485
15.09	45.7182	1991484
15.19	45.8111	1995534
15.29	45.9144	2000033
15.39	46.0189	2004582
15.49	46.1118	2008632
15.59	46.2060	2012731
15.69	46.3110	2017306
15.79	46.4022	2021280
15.89	46.5055	2025779
15.99	46.6008	2029929
16.09	46.7006	2034278
16.19	46.7982	2038528
16.29	46.9003	2042977
16.39	47.0099	2047752
16.49	47.1132	2052251
16.59	47.1993	2056000
16.69	47.3008	2060425
16.79	47.3823	2063974
16.89	47.4736	2067949
16.99	47.5677	2072048
17.09	47.6566	2075923
17.19	47.7364	2079397
17.29	47.8230	2083172
17.39	47.9028	2086646
17.49	47.9831	2090146
17.59	48.0635	2093645
17.69	48.1547	2097620
17.79	48.2356	2101144
17.89	48.3217	2104894
17.99	48.3969	2108168
18.09	48.4887	2112168

Stage [ft]	Area [ac]	Area [ft2]
18.19	48.5736	2115867
18.29	48.6454	2118992
18.39	48.7326	2122792
18.49	48.8141	2126341
18.59	48.9053	2130316
18.69	49.0281	2135665
18.79	49.1303	2140114
18.89	49.2290	2144414
19.00	49.3179	2148288
19.10	49.3891	2151388
19.20	49.4539	2154212
19.30	49.5314	2157587
19.40	49.5997	2160561
19.50	49.6685	2163561
19.60	49.7288	2166186
19.70	49.7976	2169185
19.80	49.8562	2171735
19.90	49.9176	2174410
20.00	49.9801	2177134
20.10	50.0484	2180109
20.20	50.1121	2182884
20.30	50.1712	2185458
20.40	50.2384	2188383
20.50	50.2917	2190707
20.60	50.3583	2193607
20.70	50.4237	2196457
20.80	50.4880	2199256
20.90	50.5459	2201781
21.00	50.6102	2204581
21.10	50.6739	2207355
21.20	50.7456	2210480
21.30	50.8099	2213279
21.40	50.8782	2216254
21.50	50.9362	2218779
21.60	51.0159	2222253
21.70	51.0664	2224453
21.80	51.1318	2227303
21.90	51.1972	2230152
22.00	51.2764	2233602
22.10	51.3442	2236551
22.20	51.4119	2239501
22.30	51.4813	2242526
22.40	51.5439	2245250
22.50	51.6064	2247975
22.60	51.6684	2250674
22.70	51.7464	2254074
22.80	51.8107	2256874
22.90	51.8738	2259623
23.00	51.9387	2262448

Stage [ft]	Area [ac]	Area [ft2]
23.10	52.0001	2265123
23.20	52.0672	2268047
23.30	52.1366	2271072
23.40	52.2141	2274446
23.50	52.2824	2277421
23.60	52.3581	2280720
23.70	52.4304	2283870
23.80	52.4982	2286820
23.90	52.5751	2290169
24.00	52.6491	2293394
24.10	52.7139	2296218
24.20	52.7971	2299843
24.30	52.8660	2302842
24.40	52.9394	2306042
24.50	53.0152	2309342
24.60	53.0915	2312666
24.70	53.1621	2315741
24.80	53.2413	2319190
24.90	53.3176	2322515
25.00	53.3847	2325439
25.10	53.4588	2328664
25.20	53.5362	2332039
25.30	53.6137	2335413
25.40	53.6963	2339013
25.50	53.7681	2342137
25.60	53.8444	2345462
25.70	53.9201	2348761
25.80	53.9930	2351936
25.90	54.0636	2355011
26.00	54.1371	2358210
26.10	54.2111	2361435
26.20	54.2891	2364834
26.30	54.3649	2368134
26.40	54.4429	2371533
26.50	54.5187	2374833
26.60	54.5933	2378082
26.70	54.6765	2381707
26.80	54.7666	2385631
26.90	54.8440	2389006
27.00	54.9301	2392756
27.10	55.0202	2396680
27.20	55.1069	2400454
27.30	55.1883	2404004
27.40	55.2744	2407753
27.50	55.3714	2411978
27.60	55.4649	2416052
27.70	55.5562	2420027
27.80	55.6509	2424151
27.90	55.7346	2427801

Stage [ft]	Area [ac]	Area [ft2]
28.00	55.8242	2431700
28.10	55.9252	2436100
28.20	56.0376	2440999
28.30	56.1501	2445898
28.40	56.2362	2449648
28.50	56.3469	2454472
28.60	56.4451	2458747
28.70	56.5575	2463646
28.80	56.6683	2468470
28.90	56.7676	2472795
29.00	56.8892	2478094
29.10	56.9988	2482868
29.20	57.1119	2487793
29.30	57.2295	2492917
29.40	57.3477	2498066
29.50	57.4699	2503391
29.60	57.5836	2508340
29.70	57.7006	2513439
29.80	57.8229	2518764
29.90	57.9439	2524038
30.00	58.0708	2529562
30.10	58.2033	2535336
30.20	58.3301	2540861
30.30	58.4598	2546510
30.40	58.6107	2553084
30.50	58.7479	2559058
30.60	58.8724	2564483
30.70	58.9906	2569632
30.80	59.1146	2575031
30.90	59.2093	2579156
31.00	59.3108	2583580
31.10	59.3935	2587180
31.20	59.4600	2590079
31.30	59.5409	2593604
31.40	59.5932	2595878
31.50	59.6477	2598253
31.60	59.6901	2600103
31.70	59.7452	2602502
31.80	59.7877	2604352
31.90	59.8325	2606302
32.00	59.8772	2608252
32.10	59.9203	2610126
32.20	59.9507	2611451
32.30	60.0006	2613626
32.40	60.0258	2614726
32.50	60.0597	2616201
32.60	60.0924	2617625
32.70	60.1211	2618875
32.80	60.1527	2620250

Stage [ft]	Area [ac]	Area [ft2]
32.90	60.1681	2620921
33.00	60.1681	2620921

Comment:

Node: B-7

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.83	2.0400	88863
-1.80	2.0406	88888
-1.70	2.0423	88963
-1.60	3.4543	150467
-1.49	3.4660	150980
-1.40	4.9477	215521
-1.29	4.9603	216071
-1.19	4.9672	216371
-1.09	4.9747	216696
-0.99	4.9867	217221
-0.89	4.9970	217671
-0.79	5.0108	218271
-0.69	5.0240	218846
-0.59	5.0355	219346
-0.49	5.0464	219821
-0.39	5.0596	220396
-0.29	5.0688	220796
-0.19	5.0837	221445
-0.09	5.0963	221995
0.00	5.1152	222820
0.10	5.1342	223645
0.20	5.1566	224620
0.30	5.1778	225545
0.40	5.1939	226245
0.50	5.2082	226870
0.60	5.2243	227570
0.70	5.2398	228245
0.80	5.2576	229019
0.90	5.2754	229794
1.00	5.2937	230594
1.10	5.3075	231194
1.20	5.3207	231769
1.30	5.3402	232619

Stage [ft]	Area [ac]	Area [ft2]
1.40	5.3695	233894
1.50	5.3844	234544
1.60	5.4010	235269
1.70	5.4343	236718
1.80	5.4630	237968
1.90	5.4957	239393
2.00	5.5227	240568
2.10	5.5462	241593
2.20	5.5726	242743
2.30	5.5984	243867
2.40	5.6420	245767
2.50	5.7138	248892
2.60	5.7947	252416
2.70	5.9066	257291
2.80	6.1057	265964
2.90	6.3542	276788
3.00	6.6566	289961
3.10	7.0898	308834
3.20	7.6425	332906
3.30	8.2863	360952
3.40	8.9445	389623
3.50	9.6601	420794
3.60	10.3631	451415
3.70	11.1418	485335
3.80	11.9589	520930
3.90	12.9631	564675
4.00	14.0776	613218
4.10	15.2809	665636
4.20	16.7557	729878
4.30	18.5960	810042
4.40	20.3996	888606
4.50	22.2084	967396
4.60	23.9942	1045185
4.70	25.6480	1117226
4.80	27.2806	1188341
4.89	28.6205	1246709
4.99	30.4040	1324398
5.09	32.0498	1396089
5.19	33.7248	1469054
5.29	35.3368	1539269
5.39	36.7352	1600186
5.49	37.8577	1649080
5.59	38.5520	1679326
5.69	39.0231	1699848
5.79	39.4759	1719570
5.89	39.8483	1735793
5.99	40.1863	1750516
6.09	40.4778	1763215
6.19	40.7378	1774538

Stage [ft]	Area [ac]	Area [ft2]
6.29	40.9381	1783262
6.39	41.0901	1789886
6.49	41.2147	1795310
6.59	41.3415	1800835
6.69	41.4671	1806309
6.79	41.5986	1812033
6.89	41.7449	1818407
6.99	41.8683	1823781
7.09	41.9905	1829106
7.19	42.1213	1834805
7.29	42.2556	1840654
7.39	42.3359	1844154
7.49	42.3956	1846753
7.59	42.4433	1848828
7.69	42.4811	1850478
7.79	42.5167	1852028
7.89	42.5511	1853527
7.99	42.5879	1855127
8.09	42.5933	1855365
8.19	42.5933	1855365

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-8

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.67 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.67	0.0006	25
3.70	0.0013	58
3.80	0.0020	87
3.90	0.0025	108
4.00	0.0034	150
4.09	0.0046	200
4.20	0.0071	308
4.30	0.0098	425
4.39	0.0121	525
4.49	0.0189	825
4.60	0.0362	1575
4.69	0.0482	2100
4.79	0.0671	2925
4.89	0.0889	3874
4.99	0.1228	5349

Stage [ft]	Area [ac]	Area [ft2]
5.09	0.1750	7624
5.19	0.2634	11473
5.29	0.3896	16973
5.39	0.5463	23797
5.49	0.7035	30646
5.59	0.8906	38795
5.69	1.1414	49718
5.79	1.4220	61942
5.89	1.7726	77215
5.99	2.1749	94737
6.09	2.5393	110610
6.19	2.8709	125058
6.29	3.2221	140356
6.39	3.5343	153954
6.49	3.8161	166228
6.59	4.0416	176051
6.69	4.2321	184350
6.79	4.3836	190949
6.89	4.4961	195849
6.99	4.5621	198723
7.09	4.5965	200223
7.19	4.6200	201248
7.30	4.6281	201598
7.40	4.6328	201806
7.50	4.6361	201948
7.60	4.6381	202036
7.70	4.6392	202083
7.80	4.6433	202263
7.90	4.6433	202263

Comment:

Node: B-9

Scenario: Future
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0109	475
-1.30	0.0109	476
-1.20	0.0110	479
-1.10	0.0111	483
-1.00	0.0112	486
-0.90	0.0112	489

Stage [ft]	Area [ac]	Area [ft2]
-0.80	0.0113	493
-0.70	0.0114	496
-0.60	0.0115	500
-0.50	0.0117	508
-0.40	0.0119	516
-0.30	0.0121	525
-0.20	0.0125	544
-0.10	0.0129	562
0.00	0.0133	578
0.10	0.0137	595
0.20	0.0145	629
0.30	0.0150	652
0.40	0.0153	668
0.50	0.0159	694
0.60	0.0169	737
0.70	0.0177	770
0.80	0.0181	790
0.90	0.0191	830
1.00	0.0201	875
1.09	0.0207	900
1.20	0.0230	1002
1.30	0.0232	1010
1.40	0.0234	1018
1.50	0.0237	1031
1.60	0.0243	1060
1.70	0.0247	1075
1.80	0.0249	1085
1.90	0.0252	1096
2.00	0.0253	1104
2.10	0.0255	1110
2.20	0.0256	1116
2.30	0.0258	1122
2.40	0.0265	1156
2.50	0.0269	1172
2.60	0.0277	1206
2.70	0.0279	1217
2.80	0.0298	1300
2.90	0.0303	1321
3.00	0.0308	1341
3.10	0.0311	1354
3.20	0.0312	1360
3.30	0.0314	1367
3.40	0.0315	1373
3.50	0.0321	1400
3.60	0.0333	1450
3.70	0.0362	1575
3.80	0.0390	1700
3.90	0.0499	2175
4.00	0.0648	2825

Stage [ft]	Area [ac]	Area [ft2]
4.10	0.0821	3575
4.20	0.1079	4699
4.30	0.1343	5849
4.40	0.1773	7724
4.50	0.2163	9424
4.59	0.2473	10774
4.69	0.2875	12523
4.79	0.3311	14423
4.89	0.3644	15873
4.99	0.3937	17148
5.09	0.4310	18772
5.19	0.4608	20072
5.29	0.5079	22122
5.39	0.5647	24597
5.49	0.6255	27246
5.59	0.7317	31871
5.69	0.8436	36745
5.79	1.0455	45544
5.89	1.2510	54493
5.99	1.4117	61492
6.09	1.5281	66566
6.19	1.6343	71191
6.29	1.7095	74465
6.39	1.7560	76490
6.49	1.7910	78015
6.59	1.8243	79464
6.69	1.8478	80489
6.79	1.8673	81339
6.89	1.8845	82089
7.00	1.8977	82664
7.09	1.9098	83189
7.19	1.9230	83764
7.29	1.9367	84364
7.39	1.9539	85114
7.49	1.9654	85614
7.59	1.9662	85648
7.69	1.9662	85648

Comment:

Node: DISCHARGE TO GOLF COURSE

Scenario: Future
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	0.00
0	0	0	10.0000	0.99
0	0	0	20.0000	1.79
0	0	0	30.0000	2.15
0	0	0	40.0000	2.55
0	0	0	50.0000	2.53
0	0	0	60.0000	3.22
0	0	0	64.0000	4.81
0	0	0	70.0000	4.50
0	0	0	80.0000	3.42
0	0	0	90.0000	2.71
0	0	0	96.0000	2.50

Comment: BASED ON PREVIOUS STUDY CONDUCTED FOR THE GOLF COURSE.
USED PREVIOUS DATA AS A BASIS FOR THE TAILWATER CONDITIONS FROM HH ICPR MODEL

Node: FUTURE EXFIL - INFINITY AZURE

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.07	0.85	36852
3.13	1.69	73704

Comment: INCLUDES STORAGE FOR BOTH SW 55TH AVE AND INFINITY AZURE

Node: FUTURE EXFIL - N PARK RD

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.07	0.26	11522
3.13	0.53	23043

Comment:

Node: FUTURE EXFIL - S PARK RD

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.07	0.07	3071
3.13	0.14	6142

Comment:

Node: FUTURE EXFIL - SW 31ST AVE

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.27	0.67	29185
3.53	1.34	58370

Comment:

Node: FUTURE EXFIL - SW 36TH CT

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
3.17	0.12	5249
5.33	0.24	10498

Comment:

Node: FUTURE EXFIL - SW 52ND AVE

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
3.77	0.89	38594
6.53	1.77	77188

Comment:

Node: STORAGE ON 52ND

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.62	0.86	37462
4.23	1.72	74923

Comment: Approx. 1980 LF of 5'x5' Exfil running along SW 52nd St

1.72 ac-ft

Node: STORAGE ON SITE 19

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.66	0.11	4574

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.32	0.21	9148

Comment: SW 31ST ST DRAINAGE IMPROVEMENTS

https://dpep.broward.org/Enviros/Default.aspx?PossePresentation=SurfaceWaterLicense&PosseObjectId=33557971

0.21 AC-FT
TOP OF TRENCH: 3.32 NAVD

WT:2

BOT OF TRENCH: -0.93 NAVD

Node: STORAGE ON SITE 1

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.50	2.68	116741
4.00	4.34	189050
5.00	7.80	339768
6.00	11.37	495277
7.00	16.69	727016
8.00	25.49	1110344
9.00	37.78	1645697
10.00	53.55	2332638
11.00	71.07	3095809

Comment:

Node: STORAGE ON SITE 11

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.00	0.39	16988

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.78	33977

Comment: NEED MORE INFORMATION

Node: STORAGE ON SITE 12

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
9.20	0.04	1742
9.40	0.16	6970
9.60	0.36	15682
9.80	0.61	26572
10.00	0.93	40511
10.20	1.28	55757
10.40	1.64	71438
10.60	2.00	87120
10.80	2.36	102802

Comment:

Node: STORAGE ON SITE 13

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.00	0.00	0
5.00	0.09	3920
6.00	0.18	7841
7.00	0.27	11761
8.00	0.36	15682
9.00	0.49	21344
10.00	0.71	30928
11.00	1.65	71874
12.00	3.20	139392

Comment: K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2004 Apartment complex discharging to onsite retention\Calculations - Revised .pdf.pdf

Node: STORAGE ON SITE 14

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	0.27	11761
4.50	0.54	23522

Comment:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=77827255&hash=1DC8E684EBA90B369411BEA9A491E7D2E453F1F2

Node: STORAGE ON SITE 15

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	0.16	6970
3.00	0.33	14375
3.50	0.51	22216
4.00	0.71	30928
4.50	0.93	40511
5.00	1.16	50530
5.50	1.41	61420
6.00	1.67	72745
6.50	1.72	74923
7.00	1.72	74923

Comment: STORAGE IS USED BY MULTIPLE BASINS IN THE AREA

Node: STORAGE ON SITE 17

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	2.52	109858
4.50	5.04	219717

Comment: USING PERMIT FROM BROWARD THAT IS FOR MUCH LARGER AREA AND ASSUMING THAT STAGE STORAGE IS 1/5 OF THAT NUMBER FOR A ROUGH ESTIMATE
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=37159263&hash=D3675B834D18CCEC4310DCD6F0656AEC0FCED9C3

Node: STORAGE ON SITE 18

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.50	0.00	0
5.00	3.61	157252
5.50	7.54	328442
6.00	11.79	513572
6.50	16.36	712642
7.00	21.77	948301
7.50	28.52	1242331
8.00	36.61	1594732
8.50	46.04	2005502
9.00	57.37	2499037
9.50	70.64	3077078
10.00	85.34	3717410
10.50	101.47	4420033
11.00	119.03	5184947
11.50	138.02	6012151

Comment: NEEDS MORE INFORMATION

Node: STORAGE ON SITE 2

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.02	871
4.50	0.04	1742

Comment:

Node: STORAGE ON SITE 20

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
1.50	1.29	56192
2.00	2.58	112385

Comment: 25TH ST DRAINAGE IMPROVEMENTS

2.58AC-FT STORAGE

DRAINAGE CALC:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=71947644&hash=56720218B15DFE73AD2ACA8E756638FCF0B8E06F

PLANS:
K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Receivables\20240222 25th St Bid Plans

Node: STORAGE ON SITE 21

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.67	0.90	39204
4.33	1.80	78408

Comment: John P Lyons Phase 2:
Will be constructed after EPA clean up.

No drainage report given but from plan set have calculated exfil volume of 1.80 Ac-Ft

Node: STORAGE ON SITE 3

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
5.00	0.00	0
5.50	0.00	0
6.00	8.92	388555
6.50	18.58	809345
7.00	28.99	1262804
7.50	40.15	1748934
8.00	52.05	2267298
8.50	64.70	2818332
9.00	77.72	3385483
9.50	90.74	3952634
10.00	103.75	4519350

Comment:

Node: STORAGE ON SITE 4

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	7.00	304920
3.00	14.00	609840
3.50	21.00	914760
4.00	28.00	1219680
4.50	35.00	1524600
5.00	42.00	1829520
5.50	49.00	2134440
6.00	56.00	2439360
6.50	63.00	2744280
7.00	70.00	3049200
7.50	78.31	3411184
8.00	90.57	3945229
8.50	108.08	4707965
9.00	130.85	5699826
9.50	158.87	6920377
10.00	191.51	8342176

Comment:

Node: STORAGE ON SITE 5

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.16	6970
4.00	0.32	13939
4.50	0.48	20909
5.00	0.64	27878
5.50	0.79	34412
6.00	0.95	41382
6.50	1.11	48352
7.00	1.22	53143
7.50	1.49	64904
8.00	1.86	81022
8.50	2.33	101495
9.00	2.89	125888
9.50	3.56	155074
10.00	4.32	188179
10.50	5.37	233917
11.00	6.88	299693
11.50	8.86	385942
12.00	11.19	487436

Comment:

Node: STORAGE ON SITE 6

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.63	0.36	15464
5.75	0.71	30928

Comment:

https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=72592592&hash=BAF6E372B1EA46D84A6355CC91B4A7800C3A1DDA

Node: STORAGE ON SITE 8

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
6.00	0.27	11761
7.00	0.53	23087
8.00	0.66	28750

Comment:

Node: STORAGE ON SITE 9

Scenario: Future
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.01	436
3.75	0.02	871
4.00	0.03	1307
4.25	0.06	2614
4.50	0.07	3049
4.75	0.10	4356
5.00	0.13	5663
5.25	0.16	6970
5.50	0.20	8712
5.75	0.24	10454
6.00	0.28	12197
6.25	0.33	14375
6.50	0.38	16553
6.75	0.44	19166
7.00	0.50	21780
7.25	0.59	25700
7.50	0.72	31363
7.75	0.90	39204
8.00	1.13	49223
8.25	1.40	60984

Stage [ft]	Volume [ac-ft]	Volume [ft3]
8.50	1.73	75359
8.75	2.12	92347
9.00	2.63	114563
9.25	3.23	140699
9.50	3.94	171626
9.75	4.75	206910
10.00	5.66	246550

Comment: RECREATION GREEN AREA USED AS A STORAGE SITE

Node: B-1

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.60 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.60	0.0006	25
3.70	0.0024	104
3.80	0.0031	137
3.90	0.0042	183
4.00	0.0058	254
4.10	0.0075	325
4.20	0.0115	500
4.30	0.0172	750
4.40	0.0316	1375
4.50	0.0545	2375
4.60	0.1354	5899
4.70	0.3018	13148
4.80	0.4883	21272
4.90	0.7213	31421
5.00	0.9899	43119
5.10	1.2516	54518
5.20	1.5149	65991
5.30	1.8042	78590
5.40	2.0871	90913
5.50	2.3987	104486
5.60	2.7533	119934
5.70	3.1527	137332
5.80	3.6445	158754
5.90	4.0726	177401
6.00	4.4542	194024
6.10	4.8387	210772
6.20	5.2306	227845
6.30	5.6145	244567

Stage [ft]	Area [ac]	Area [ft2]
6.40	6.1080	266064
6.50	6.6537	289836
6.60	7.2936	317708
6.70	8.0069	348778
6.80	8.7649	381799
6.90	9.5631	416569
7.00	10.3171	449415
7.10	11.1240	484560
7.20	11.9618	521055
7.30	12.7353	554751
7.40	13.5094	588471
7.50	14.1877	618017
7.60	14.7673	643264
7.70	15.2947	666236
7.80	15.8226	689233
7.90	16.3861	713780
8.00	16.9628	738901
8.10	17.5223	763273
8.20	18.0818	787645
8.30	18.6580	812741
8.40	19.2341	837838
8.50	19.7890	862010
8.60	20.3325	885682
8.70	20.7846	905379
8.80	21.1571	921602
8.90	21.3705	930901
9.00	21.5157	937225
9.10	21.5978	940801
9.20	21.5978	940801

Comment:

Node: B-10

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0184	800
-1.30	0.0196	852
-1.20	0.0203	883
-1.10	0.0224	975
-1.00	0.0230	1000
-0.90	0.0249	1083

Stage [ft]	Area [ac]	Area [ft2]
-0.80	0.0266	1158
-0.70	0.0277	1207
-0.60	0.0285	1244
-0.50	0.0302	1315
-0.40	0.0311	1355
-0.30	0.0326	1420
-0.20	0.0359	1565
-0.10	0.0413	1800
0.00	0.0494	2150
0.09	0.0545	2375
0.20	0.0625	2725
0.30	0.0660	2875
0.40	0.0708	3083
0.50	0.0729	3175
0.60	0.0760	3312
0.70	0.0792	3450
0.80	0.0834	3633
0.90	0.0867	3775
0.99	0.0895	3899
1.09	0.0941	4099
1.20	0.1012	4408
1.30	0.1062	4624
1.40	0.1106	4816
1.50	0.1159	5049
1.60	0.1217	5299
1.70	0.1261	5493
1.80	0.1314	5724
1.90	0.1343	5849
2.00	0.1400	6099
2.10	0.1458	6349
2.20	0.1538	6699
2.30	0.1618	7049
2.40	0.1681	7324
2.50	0.1762	7674
2.60	0.1854	8074
2.70	0.1917	8349
2.80	0.2014	8774
2.90	0.2129	9274
3.00	0.2196	9565
3.10	0.2304	10036
3.20	0.2381	10374
3.30	0.2479	10799
3.40	0.2663	11598
3.50	0.2863	12473
3.60	0.3162	13773
3.70	0.3483	15173
3.80	0.3954	17223
3.90	0.4470	19472
4.00	0.5050	21997

Stage [ft]	Area [ac]	Area [ft2]
4.10	0.5779	25172
4.20	0.7282	31721
4.30	0.9486	41319
4.40	1.2716	55393
4.50	1.6590	72265
4.59	2.0549	89513
4.69	2.5243	109960
4.79	3.0511	132907
4.89	3.6772	160179
4.99	4.4163	192374
5.09	5.2897	230419
5.19	6.4810	282312
5.29	8.2025	357302
5.39	10.4847	456714
5.49	13.2650	577823
5.59	16.6685	726078
5.69	20.1775	878933
5.79	23.9161	1041786
5.89	27.6937	1206339
5.99	31.1075	1355044
6.09	33.9590	1479252
6.19	36.3571	1583714
6.29	38.2680	1666952
6.39	39.9046	1738243
6.49	41.5337	1809208
6.59	43.1399	1879174
6.69	44.8040	1951664
6.79	46.2932	2016531
6.89	47.7347	2079322
6.99	49.1067	2139089
7.09	50.4145	2196057
7.19	51.7722	2255199
7.29	53.1483	2315141
7.39	54.5313	2375383
7.49	55.9372	2436625
7.59	57.3443	2497916
7.69	58.8093	2561733
7.79	60.2996	2626649
7.89	61.8369	2693615
7.99	63.3283	2758582
8.09	64.9689	2830047
8.19	66.5579	2899263
8.29	68.0063	2962354
8.39	69.3657	3021572
8.49	70.6494	3077489
8.59	71.7633	3126008
8.69	72.7376	3168452
8.79	73.6638	3208797
8.89	74.5108	3245692

Stage [ft]	Area [ac]	Area [ft2]
8.99	75.3630	3282812
9.09	76.1153	3315582
9.19	76.8624	3348128
9.29	77.6216	3381199
9.39	78.3263	3411894
9.49	79.0918	3445240
9.59	79.8315	3477461
9.69	80.5442	3508506
9.79	81.2965	3541277
9.89	82.0563	3574373
9.99	82.8276	3607968
10.09	83.6843	3645288
10.19	84.6484	3687283
10.29	85.9659	3744675
10.39	87.2536	3800767
10.49	87.7689	3823214
10.59	88.0260	3834413
10.69	88.2165	3842712
10.79	88.3634	3849111
10.89	88.5121	3855585
10.99	88.6383	3861084
11.09	88.8173	3868883
11.19	88.9614	3875158
11.29	89.0526	3879132
11.39	89.1548	3883581
11.49	89.2558	3887981
11.59	89.3459	3891905
11.69	89.4268	3895430
11.79	89.5025	3898729
11.89	89.5559	3901054
11.99	89.5903	3902554
12.09	89.6127	3903529
12.19	89.6270	3904154
12.29	89.6385	3904654
12.39	89.6431	3904854
12.50	89.6444	3904910
12.60	89.6457	3904969
12.70	89.6484	3905083
12.80	89.6488	3905104
12.90	89.6530	3905286
13.00	89.6543	3905343
13.09	89.6569	3905453
13.20	89.6589	3905540
13.29	89.6597	3905578
13.40	89.6602	3905600
13.50	89.6615	3905653
13.60	89.6619	3905671
13.70	89.6625	3905697
13.80	89.6635	3905741

Stage [ft]	Area [ac]	Area [ft2]
13.90	89.6651	3905813
14.00	89.6663	3905863
14.09	89.6672	3905903
14.20	89.6680	3905937
14.29	89.6689	3905978
14.40	89.6706	3906053
14.49	89.6729	3906153
14.60	89.6741	3906203
14.70	89.6759	3906284
14.80	89.6763	3906298
14.90	89.6774	3906347
15.00	89.6779	3906367
15.10	89.6785	3906397
15.20	89.6796	3906444
15.30	89.6816	3906531
15.40	89.6820	3906546
15.50	89.6824	3906566
15.60	89.6831	3906596
15.70	89.6838	3906628
15.80	89.6848	3906669
15.90	89.6861	3906728
16.00	89.6872	3906773
16.10	89.6883	3906823
16.20	89.6894	3906871
16.30	89.6903	3906908
16.39	89.6907	3906928
16.50	89.6909	3906937
16.60	89.6911	3906945
16.70	89.6913	3906953
16.80	89.6916	3906965
16.90	89.6918	3906976
17.00	89.6924	3907001
17.10	89.6927	3907012
17.20	89.6929	3907022
17.30	89.6934	3907043
17.40	89.6942	3907080
17.50	89.6942	3907080

Comment:

Node: B-11

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	19.8875	866300
4.00	23.2501	1012775
4.50	25.9642	1131002
5.00	41.6244	1813161
5.50	53.9220	2348844
6.00	58.6297	2553910
6.50	61.0130	2657725
7.00	61.0130	2657725

Comment:

Node: B-12

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.58	5.3562	233315
4.00	19.3591	843282
4.50	25.7000	1119494
5.00	29.3028	1276432
5.50	31.4405	1369549
6.00	33.8904	1476267
6.50	34.3276	1495309
7.00	34.4913	1502439
7.50	34.4913	1502439

Comment:

Node: B-13

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.66 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.66	0.0006	25
5.70	0.0008	33
5.80	0.0012	52
5.90	0.0017	76

Stage [ft]	Area [ac]	Area [ft2]
6.00	0.0020	86
6.10	0.0022	95
6.20	0.0027	116
6.30	0.0030	130
6.40	0.0032	138
6.50	0.0034	146
6.60	0.0038	166
6.69	0.0046	200
6.80	0.0054	233
6.89	0.0063	275
6.99	0.0069	300
7.10	0.0071	311
7.20	0.0074	321
7.30	0.0083	362
7.40	0.0090	393
7.50	0.0096	417
7.59	0.0109	475
7.70	0.0113	491
7.80	0.0119	520
7.90	0.0141	615
8.00	0.0149	650
8.10	0.0160	697
8.20	0.0189	825
8.29	0.0252	1100
8.39	0.0367	1600
8.49	0.0625	2725
8.59	0.1010	4399
8.69	0.1475	6424
8.79	0.1865	8124
8.89	0.2416	10524
8.99	0.2772	12073
9.09	0.3127	13623
9.19	0.3558	15498
9.29	0.3954	17223
9.39	0.4292	18698
9.49	0.4654	20272
9.59	0.5182	22572
9.69	0.5802	25272
9.79	0.6611	28796
9.89	0.7420	32321
9.99	0.8315	36220
10.09	0.9342	40695
10.19	1.0530	45869
10.29	1.2108	52743
10.39	1.3394	58342
10.49	1.4794	64441
10.59	1.6400	71440
10.69	1.8036	78565
10.79	1.9901	86688

Stage [ft]	Area [ac]	Area [ft2]
10.89	2.2018	95912
10.99	2.4211	105461
11.09	2.6948	117384
11.19	2.9955	130483
11.29	3.2617	142081
11.39	3.5435	154354
11.49	3.7713	164278
11.59	3.9383	171552
11.69	4.0617	176926
11.79	4.1650	181426
11.89	4.2533	185275
11.99	4.3239	188350
12.09	4.3911	191274
12.19	4.4484	193774
12.29	4.4840	195324
12.39	4.5173	196774
12.49	4.5305	197349
12.59	4.5437	197924
12.69	4.5489	198149
12.80	4.5525	198306
12.90	4.5540	198374
13.00	4.5540	198374

Comment:

Node: B-14

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.21	0.7816	34045
-0.20	0.7822	34070
-0.10	0.7896	34395
0.00	0.7936	34570
0.10	0.7997	34837
0.20	0.8019	34931
0.30	0.8078	35187
0.40	0.8120	35370
0.50	0.8160	35545
0.60	0.8200	35720
0.70	0.8223	35820
0.80	0.8292	36120
0.89	0.8326	36270

Stage [ft]	Area [ac]	Area [ft2]
1.00	0.8362	36425
1.09	0.8401	36595
1.20	0.8481	36945
1.30	0.8530	37158
1.40	0.8585	37395
1.50	0.8648	37670
1.60	0.8699	37895
1.70	0.8763	38170
1.80	0.8814	38395
1.90	0.8875	38657
2.00	0.8921	38861
2.10	0.8986	39145
2.20	0.9035	39355
2.30	0.9061	39470
2.40	0.9136	39795
2.50	0.9191	40036
2.60	0.9241	40253
2.70	0.9308	40545
2.80	0.9411	40995
2.90	0.9514	41444
3.00	0.9576	41714
3.10	0.9623	41919
3.20	0.9709	42294
3.30	0.9801	42694
3.40	0.9859	42944
3.50	0.9933	43269
3.60	0.9996	43544
3.70	1.0024	43663
3.80	1.0074	43882
3.90	1.0137	44157
4.00	1.0220	44519
4.10	1.0358	45119
4.20	1.0530	45869
4.30	1.0714	46669
4.40	1.0915	47544
4.50	1.1133	48494
4.59	1.1420	49743
4.69	1.1810	51443
4.79	1.2275	53468
4.89	1.2923	56293
4.99	1.3669	59542
5.09	1.4581	63517
5.19	1.5574	67841
5.29	1.6636	72465
5.39	1.7887	77915
5.49	1.9379	84414
5.59	2.1095	91888
5.69	2.3040	100362
5.79	2.5163	109610

Stage [ft]	Area [ac]	Area [ft2]
5.89	2.7659	120484
5.99	3.0483	132782
6.09	3.3065	144031
6.19	3.5969	156679
6.29	3.8614	168203
6.39	4.1007	178626
6.49	4.3383	188975
6.59	4.5730	199198
6.69	4.8094	209497
6.79	5.0734	220995
6.89	5.3763	234194
6.99	5.6679	246892
7.09	6.0225	262340
7.19	6.3203	275313
7.29	6.6118	288012
7.39	6.9051	300785
7.49	7.2058	313883
7.59	7.5065	326981
7.69	7.7991	339730
7.79	8.1159	353528
7.89	8.4309	367251
7.99	8.7615	381649
8.09	9.0931	396097
8.19	9.3519	407371
8.29	9.6194	419019
8.39	9.8581	429418
8.49	10.1186	440766
8.59	10.4313	454389
8.69	10.6712	464838
8.79	10.8371	472062
8.89	10.9530	477111
8.99	11.0637	481936
9.09	11.1716	486635
9.19	11.2984	492159
9.29	11.4367	498183
9.39	11.5475	503008
9.49	11.6152	505957
9.59	11.6927	509332
9.69	11.7598	512257
9.79	11.8332	515456
9.89	11.8860	517756
9.99	11.9406	520131
10.09	11.9945	522480
10.19	12.0318	524105
10.29	12.0593	525305
10.39	12.0731	525905
10.50	12.0770	526074
10.60	12.0792	526169
10.70	12.0792	526169

Comment:

Node: B-15

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.87	0.0006	25
1.90	0.0006	28
2.00	0.0009	39
2.10	0.0011	49
2.20	0.0021	90
2.30	0.0025	110
2.40	0.0031	135
2.50	0.0039	172
2.60	0.0062	271
2.70	0.0092	400
2.80	0.0207	900
2.90	0.0304	1325
3.00	0.0574	2500
3.10	0.1211	5274
3.20	0.1767	7699
3.30	0.2416	10524
3.40	0.3300	14373
3.50	0.4361	18997
3.60	0.5601	24397
3.70	0.6886	29996
3.80	0.8206	35745
3.90	0.9859	42944
4.00	1.1431	49793
4.10	1.3256	57742
4.20	1.5706	68416
4.30	1.8375	80039
4.40	2.1663	94362
4.50	2.4635	107311
4.59	2.7470	119659
4.69	3.1229	136032
4.79	3.5355	154004
4.89	3.9985	174177
4.99	4.5994	200348
5.09	5.2036	226670
5.19	5.8567	255116
5.29	6.5229	284137

Stage [ft]	Area [ac]	Area [ft2]
5.39	7.1381	310934
5.49	7.7125	335955
5.59	8.1911	356802
5.69	8.6519	376875
5.79	9.0679	394997
5.89	9.4656	412320
5.99	9.7927	426568
6.09	10.0469	437642
6.19	10.2500	446490
6.29	10.4319	454414
6.39	10.6259	462863
6.49	10.7952	470237
6.59	10.9610	477461
6.69	11.1263	484660
6.79	11.2904	491809
6.89	11.4643	499383
6.99	11.6158	505982
7.09	11.7638	512432
7.19	11.8975	518256
7.29	12.0381	524380
7.39	12.1385	528754
7.49	12.2252	532529
7.59	12.2940	535528
7.69	12.3474	537853
7.79	12.3910	539753
7.89	12.4323	541553
7.99	12.4708	543227
8.09	12.4995	544477
8.19	12.5236	545527
8.29	12.5465	546527
8.39	12.5683	547477
8.49	12.5781	547902
8.59	12.5884	548352
8.69	12.5924	548527
8.80	12.5976	548752
8.89	12.6022	548952
9.00	12.6051	549077
9.10	12.6062	549127
9.20	12.6068	549152
9.30	12.6139	549462
9.40	12.6139	549462

Comment:

Node: B-16

Scenario: Proposed

Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.28	2.2426	97687
-0.20	2.2489	97962
-0.10	2.2564	98287
0.00	2.2638	98612
0.10	2.2741	99062
0.20	2.2799	99312
0.30	2.2856	99562
0.40	2.2931	99887
0.50	2.3009	100228
0.60	2.3109	100662
0.70	2.3180	100974
0.80	2.3252	101286
0.89	2.3350	101711
0.99	2.3419	102011
1.09	2.3499	102361
1.20	2.3614	102861
1.30	2.3717	103311
1.40	2.3780	103586
1.50	2.3901	104111
1.60	2.4021	104636
1.70	2.4159	105236
1.80	2.4291	105811
1.90	2.4492	106686
2.00	2.4675	107486
2.10	2.4847	108236
2.20	2.5134	109485
2.30	2.5519	111160
2.40	2.5944	113010
2.50	2.6420	115085
2.60	2.7051	117834
2.70	2.7831	121234
2.80	2.8732	125158
2.90	2.9381	127983
3.00	3.0356	132232
3.10	3.1412	136832
3.20	3.2359	140956
3.30	3.3363	145331
3.40	3.4505	150305
3.50	3.5619	155154
3.60	3.7088	161553
3.70	3.8723	168677
3.80	4.0777	177626
3.90	4.3394	189025
4.00	4.7072	205048

Stage [ft]	Area [ac]	Area [ft2]
4.10	5.1520	224420
4.20	5.7235	249317
4.30	6.5034	283287
4.40	7.4577	324857
4.50	8.5227	371250
4.59	9.3824	408695
4.69	10.2213	445241
4.79	10.8979	474712
4.89	11.4052	496809
4.99	11.8028	514131
5.09	12.1644	529879
5.19	12.5253	545602
5.29	12.9264	563075
5.39	13.2874	578798
5.49	13.5737	591271
5.59	13.7493	598920
5.69	13.8847	604819
5.79	14.0047	610044
5.89	14.1177	614968
5.99	14.2365	620142
6.09	14.3507	625117
6.19	14.4729	630441
6.29	14.6112	636465
6.39	14.7771	643689
6.49	14.9102	649488
6.59	15.0296	654688
6.69	15.1334	659212
6.79	15.1839	661412
6.89	15.2097	662537
6.99	15.2402	663861
7.09	15.2826	665711
7.19	15.3166	667189
7.29	15.3166	667189

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-17

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.73	0.0006	25
2.80	0.0016	69

Stage [ft]	Area [ac]	Area [ft2]
2.90	0.0063	275
3.00	0.0212	925
3.10	0.0620	2700
3.20	0.1211	5274
3.30	0.2416	10524
3.40	0.4310	18772
3.50	0.6295	27421
3.60	0.8757	38145
3.70	1.1661	50793
3.80	1.4547	63367
3.90	1.7370	75665
4.00	2.0165	87838
4.10	2.3080	100537
4.20	2.5886	112760
4.30	2.8583	124508
4.39	3.0632	133432
4.49	3.2675	142331
4.59	3.5056	152705
4.69	3.8086	165903
4.79	4.1300	179901
4.89	4.4989	195974
4.99	4.9345	214946
5.09	5.4693	238243
5.19	6.0179	262140
5.29	6.6480	289586
5.39	7.2786	317058
5.49	7.7963	339605
5.59	8.2461	359202
5.69	8.5985	374550
5.79	8.9606	390323
5.89	9.2860	404496
5.99	9.5689	416819
6.09	9.8150	427543
6.19	10.0802	439091
6.29	10.3418	450490
6.39	10.5995	461713
6.49	10.8675	473387
6.59	11.1532	485835
6.69	11.4247	497659
6.79	11.7225	510632
6.89	11.9796	521830
6.99	12.2177	532204
7.09	12.4025	540253
7.19	12.5477	546577
7.29	12.6762	552176
7.39	12.7910	557176
7.49	12.8885	561425
7.59	12.9586	564475
7.69	13.0171	567024

Stage [ft]	Area [ac]	Area [ft2]
7.79	13.0727	569449
7.89	13.1152	571299
7.99	13.1428	572499
8.09	13.1500	572814
8.19	13.1500	572814

Comment:

Node: B-18

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.46	0.0006	25
1.50	0.0007	31
1.60	0.0011	47
1.70	0.0016	70
1.80	0.0022	95
1.90	0.0032	141
2.00	0.0060	262
2.10	0.0086	375
2.20	0.0143	625
2.30	0.0186	808
2.40	0.0281	1225
2.50	0.0482	2100
2.60	0.0712	3100
2.70	0.1010	4399
2.80	0.1274	5549
2.90	0.1526	6649
3.00	0.1848	8049
3.10	0.2221	9674
3.20	0.2571	11198
3.30	0.3007	13098
3.40	0.3437	14973
3.50	0.3879	16898
3.60	0.4344	18922
3.70	0.4763	20747
3.80	0.5348	23297
3.90	0.6048	26346
4.00	0.6955	30296
4.10	0.8298	36145
4.20	1.0157	44244
4.30	1.2584	54818

Stage [ft]	Area [ac]	Area [ft2]
4.40	1.5322	66741
4.50	1.7904	77990
4.59	2.0079	87463
4.69	2.2139	96437
4.79	2.4583	107086
4.89	2.7034	117759
4.99	2.9937	130408
5.09	3.3294	145031
5.19	3.6709	159904
5.29	4.0967	178451
5.39	4.5621	198723
5.49	5.1107	222620
5.59	5.4825	238818
5.69	5.7671	251216
5.79	5.9605	259640
5.89	6.1178	266489
5.99	6.2601	272689
6.09	6.4271	279963
6.19	6.5240	284187
6.29	6.6199	288361
6.39	6.7163	292561
6.49	6.8414	298010
6.59	7.1174	310034
6.69	7.2867	317408
6.79	7.3848	321682
6.89	7.4554	324757
6.99	7.5340	328181
7.09	7.6103	331506
7.19	7.6861	334805
7.29	7.7590	337980
7.39	7.8238	340805
7.49	7.8927	343804
7.59	7.9696	347154
7.69	8.0464	350503
7.79	8.1268	354003
7.89	8.2232	358202
7.99	8.2995	361527
8.09	8.3632	364301
8.19	8.4367	367501
8.29	8.5107	370725
8.39	8.6140	375225
8.49	8.7155	379649
8.59	8.7959	383149
8.69	8.8797	386798
8.79	8.9612	390348
8.89	9.0415	393847
8.99	9.1195	397247
9.09	9.1964	400596
9.19	9.2785	404171

Stage [ft]	Area [ac]	Area [ft2]
9.29	9.3606	407746
9.39	9.4386	411145
9.49	9.5252	414920
9.59	9.6234	419194
9.69	9.7169	423268
9.79	9.8162	427593
9.89	9.8977	431142
9.99	9.9780	434642
10.09	10.0515	437842
10.19	10.1393	441666
10.29	10.2265	445466
10.39	10.3315	450040
10.49	10.4422	454864
10.59	10.5519	459639
10.69	10.6563	464188
10.79	10.7447	468038
10.89	10.8204	471337
10.99	10.8853	474162
11.09	10.9501	476986
11.19	11.0333	480611
11.29	11.1372	485135
11.39	11.2255	488985
11.49	11.2944	491984
11.59	11.3661	495109
11.69	11.4350	498108
11.79	11.4884	500433
11.89	11.5257	502058
11.99	11.5589	503508
12.09	11.5968	505158
12.19	11.6427	507157
12.29	11.6760	508607
12.39	11.7179	510432
12.49	11.7451	511618
12.59	11.7451	511618

Comment:

Node: B-19

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.20	0.4700	20472

Stage [ft]	Area [ac]	Area [ft2]
0.30	1.2092	52673
0.40	1.3999	60979
0.50	1.4094	61392
0.60	1.4208	61892
0.70	1.4306	62317
0.80	1.4426	62842
0.90	1.4593	63566
1.00	1.4756	64279
1.10	1.4845	64666
1.20	1.4926	65016
1.30	1.5055	65579
1.40	1.5132	65916
1.50	1.5270	66516
1.60	1.5385	67016
1.70	1.5482	67441
1.80	1.5577	67853
1.90	1.5741	68566
2.00	1.5878	69166
2.10	1.6016	69766
2.20	1.6154	70366
2.30	1.6309	71041
2.40	1.6458	71690
2.50	1.6607	72340
2.60	1.6785	73115
2.70	1.7049	74265
2.80	1.7296	75340
2.90	1.7623	76765
3.00	1.8105	78864
3.10	1.8857	82139
3.20	1.9689	85764
3.30	2.0567	89588
3.40	2.1869	95262
3.50	2.3103	100637
3.60	2.4698	107586
3.70	2.6339	114735
3.80	2.8359	123534
3.90	3.0683	133657
4.00	3.3834	147380
4.10	3.7300	162478
4.20	4.1942	182701
4.30	4.7859	208472
4.40	5.5927	243617
4.50	6.6049	287712
4.60	7.7096	335830
4.70	8.9640	390473
4.80	10.2730	447490
4.90	11.6674	508232
5.00	13.2093	575398
5.10	14.8126	645239

Stage [ft]	Area [ac]	Area [ft2]
5.20	16.5416	720554
5.30	18.2936	796869
5.40	19.9640	869634
5.50	21.4497	934350
5.60	22.7822	992393
5.70	23.8977	1040986
5.80	24.9031	1084780
5.90	25.8305	1125175
6.00	26.5960	1158520
6.10	27.3006	1189216
6.20	27.9571	1217812
6.30	28.5694	1244484
6.40	29.1783	1271005
6.50	29.7458	1295727
6.60	30.3575	1322373
6.70	30.9555	1348420
6.80	31.6424	1378341
6.90	32.3166	1407712
7.00	33.0242	1438533
7.10	33.7392	1469679
7.20	34.3997	1498450
7.30	35.0607	1527246
7.40	35.7287	1556342
7.50	36.3863	1584988
7.60	37.0003	1611735
7.70	37.5868	1637281
7.80	38.1670	1662553
7.90	38.7448	1687725
8.00	39.2825	1711147
8.10	39.7617	1732019
8.20	40.1817	1750316
8.30	40.5869	1767964
8.40	40.9828	1785212
8.50	41.3753	1802309
8.60	41.8350	1822332
8.70	42.3377	1844229
8.80	42.7778	1863401
8.90	43.1749	1880699
9.00	43.4899	1894422
9.10	43.7413	1905371
9.20	43.9381	1913944
9.30	44.1212	1921918
9.40	44.3134	1930292
9.50	44.4942	1938166
9.60	44.6583	1945315
9.70	44.8253	1952589
9.80	44.9664	1958738
9.90	45.0893	1964088
10.00	45.1989	1968862

Stage [ft]	Area [ac]	Area [ft2]
10.10	45.3033	1973411
10.20	45.3756	1976561
10.30	45.4502	1979811
10.40	45.5334	1983435
10.50	45.6201	1987210
10.60	45.7136	1991284
10.70	45.7985	1994984
10.80	45.8892	1998933
10.90	45.9603	2002033
11.00	46.0464	2005782
11.10	46.1623	2010831
11.20	46.2513	2014706
11.30	46.3316	2018205
11.40	46.4183	2021980
11.50	46.5032	2025680
11.60	46.5835	2029179
11.70	46.5865	2029310
11.80	46.5865	2029310

Comment:

Node: B-2

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.66	0.0006	25
1.70	0.0014	59
1.80	0.0025	108
1.90	0.0092	400
2.00	0.0252	1100
2.10	0.0666	2900
2.20	0.1262	5499
2.30	0.2146	9349
2.40	0.3168	13798
2.50	0.4281	18648
2.60	0.5130	22347
2.70	0.5985	26072
2.80	0.7064	30771
2.90	0.8906	38795
3.00	1.2825	55868
3.10	1.7944	78165
3.20	2.3780	103586

Stage [ft]	Area [ac]	Area [ft2]
3.30	2.9955	130483
3.40	3.5515	154704
3.50	3.9222	170852
3.60	4.1317	179976
3.70	4.2975	187200
3.80	4.4249	192749
3.90	4.5276	197224
4.00	4.6447	202323
4.10	4.7354	206272
4.20	4.8335	210547
4.30	4.9729	216621
4.40	5.1761	225470
4.50	5.4263	236368
4.59	5.6977	248192
4.69	6.0609	264015
4.79	6.4799	282262
4.89	6.9332	302010
4.99	7.4439	324257
5.09	7.9850	347829
5.19	8.6128	375175
5.29	9.4311	410820
5.39	10.2523	446590
5.49	11.2278	489085
5.59	12.9104	562375
5.69	14.6583	638515
5.79	15.9070	692907
5.89	17.0443	742451
5.99	18.2689	795794
6.09	19.3495	842862
6.19	20.4788	892056
6.29	20.9861	914153
6.39	21.4532	934500
6.49	21.9719	957097
6.59	22.5573	982594
6.69	23.2149	1011240
6.79	23.9356	1042636
6.89	24.7074	1076256
6.99	25.5590	1113351
7.09	26.5357	1155896
7.19	27.5577	1200415
7.29	28.6153	1246484
7.39	29.7888	1297602
7.49	31.0111	1350845
7.59	32.0521	1396189
7.69	32.9783	1436533
7.79	33.8006	1472353
7.89	34.5391	1504524
7.99	35.2817	1536870
8.09	35.9990	1568116

Stage [ft]	Area [ac]	Area [ft2]
8.19	36.6675	1597237
8.29	37.2941	1624533
8.39	37.9254	1652029
8.49	38.5870	1680851
8.59	39.1402	1704947
8.69	39.6871	1728769
8.79	40.1450	1748717
8.89	40.5473	1766239
8.99	40.8950	1781387
9.09	41.1986	1794610
9.19	41.4339	1804859
9.29	41.6605	1814733
9.39	41.8832	1824431
9.49	42.0898	1833430
9.59	42.3107	1843054
9.69	42.5523	1853577
9.79	42.8381	1866026
9.89	43.1221	1878399
9.99	43.4481	1892597
10.09	43.7637	1906345
10.19	44.0179	1917419
10.29	44.2658	1928218
10.39	44.4993	1938391
10.49	44.6973	1947015
10.59	44.8982	1955764
10.69	45.1053	1964788
10.79	45.2924	1972937
10.89	45.4634	1980386
10.99	45.6401	1988085
11.09	45.8002	1995059
11.19	45.9718	2002533
11.29	46.1359	2009682
11.39	46.3121	2017356
11.49	46.4831	2024805
11.59	46.6449	2031854
11.69	46.8091	2039003
11.79	46.9629	2045702
11.89	47.1321	2053076
11.99	47.3100	2060825
12.09	47.4896	2068649
12.19	47.6790	2076898
12.29	47.8512	2084397
12.39	48.0113	2091371
12.49	48.1593	2097820
12.59	48.2712	2102694
12.69	48.4043	2108493
12.79	48.6058	2117267
12.89	48.7412	2123166
12.99	48.8525	2128016

Stage [ft]	Area [ac]	Area [ft2]
13.09	48.9352	2131615
13.19	48.9891	2133965
13.29	49.0390	2136140
13.39	49.0763	2137765
13.49	49.1176	2139564
13.59	49.1567	2141264
13.69	49.1894	2142689
13.79	49.2152	2143814
13.89	49.2445	2145089
13.99	49.2829	2146763
14.09	49.3208	2148413
14.19	49.3558	2149938
14.29	49.3982	2151788
14.39	49.4350	2153387
14.49	49.4769	2155212
14.59	49.5199	2157087
14.69	49.5647	2159037
14.79	49.6140	2161186
14.89	49.6875	2164386
14.99	49.8022	2169385
15.09	49.9118	2174160
15.19	50.0450	2179959
15.29	50.2011	2186758
15.39	50.3577	2193582
15.49	50.4685	2198406
15.59	50.5706	2202856
15.69	50.5792	2203230
15.79	50.5792	2203230

Comment:

Node: B-20

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	81.0865	3532128
-0.30	81.1043	3532903
-0.20	81.1456	3534703
-0.10	81.1927	3536753
0.00	81.2529	3539377
0.09	81.2942	3541177
0.20	81.3459	3543427

Stage [ft]	Area [ac]	Area [ft2]
0.30	81.3947	3545552
0.40	81.4366	3547376
0.50	81.4893	3549676
0.60	81.5358	3551701
0.70	81.5909	3554100
0.80	81.6489	3556625
0.89	81.7005	3558875
0.99	81.7596	3561449
1.09	81.8268	3564374
1.20	81.8928	3567249
1.30	81.9576	3570073
1.40	82.0225	3572898
1.50	82.0833	3575548
1.60	82.1435	3578172
1.70	82.2095	3581047
1.80	82.2772	3583996
1.90	82.3518	3587246
2.00	82.4379	3590995
2.10	82.5355	3595245
2.20	82.6307	3599394
2.30	82.7380	3604069
2.40	82.8408	3608543
2.50	82.9607	3613767
2.60	83.0755	3618767
2.70	83.2034	3624341
2.80	83.3274	3629740
2.90	83.4605	3635540
3.00	83.5925	3641289
3.10	83.7296	3647263
3.20	83.8565	3652787
3.30	83.9816	3658236
3.40	84.1124	3663936
3.50	84.2576	3670260
3.60	84.4045	3676659
3.70	84.5525	3683108
3.80	84.7069	3689832
3.90	84.8888	3697756
4.00	85.0661	3705480
4.10	85.2561	3713754
4.20	85.4540	3722378
4.30	85.6578	3731252
4.40	85.8902	3741375
4.50	86.1742	3753749
4.59	86.4795	3767047
4.69	86.8806	3784520
4.79	87.3517	3805042
4.89	87.9267	3830089
4.99	88.6722	3862559
5.09	89.7935	3911403

Stage [ft]	Area [ac]	Area [ft2]
5.19	91.3761	3980343
5.29	93.6744	4080455
5.39	96.5694	4206563
5.49	100.0337	4357468
5.59	104.2853	4542668
5.69	109.4511	4767688
5.79	115.8087	5044626
5.89	123.0013	5357935
5.99	130.1634	5669918
6.09	136.9451	5965328
6.19	143.2993	6242116
6.29	149.3528	6505806
6.39	154.8886	6746949
6.49	159.8621	6963595
6.59	164.3726	7160069
6.69	168.1272	7323622
6.79	171.3012	7461879
6.89	173.9678	7578038
6.99	176.4463	7685999
7.09	178.6842	7783486
7.19	180.4551	7860625
7.29	181.9620	7926267
7.39	183.2090	7980584
7.49	184.2953	8027903
7.59	185.2370	8068923
7.69	186.0668	8105068
7.79	186.7502	8134839
7.89	187.3768	8162135
7.99	187.8566	8183032
8.09	188.2129	8198555
8.19	188.4729	8209879
8.29	188.6864	8219177
8.39	188.8671	8227051
8.49	189.0014	8232901
8.59	189.0984	8237125
8.69	189.1770	8240550
8.79	189.2608	8244199
8.89	189.3210	8246824
8.99	189.3939	8249998
9.09	189.4794	8253723
9.19	189.5454	8256597
9.29	189.6194	8259822
9.39	189.7003	8263347
9.49	189.7457	8265321
9.59	189.7916	8267321
9.69	189.8495	8269846
9.79	189.9132	8272620
9.89	189.9695	8275070
9.99	190.0211	8277320

Stage [ft]	Area [ac]	Area [ft2]
10.09	190.0693	8279419
10.19	190.1187	8281569
10.29	190.1738	8283969
10.39	190.2277	8286319
10.49	190.3166	8290193
10.59	190.3976	8293718
10.69	190.4871	8297617
10.79	190.5680	8301142
10.89	190.6311	8303891
10.99	190.6983	8306816
11.09	190.7654	8309740
11.19	190.8429	8313115
11.29	190.9094	8316015
11.39	190.9892	8319489
11.49	191.0690	8322964
11.59	191.1533	8326638
11.69	191.2526	8330963
11.79	191.2583	8331212
11.89	191.2583	8331212

Comment:

Node: B-21

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-0.34	0.0011	50
-0.30	0.0015	67
-0.20	0.0020	88
-0.10	0.0024	103
0.00	0.0026	115
0.09	0.0029	125
0.20	0.0037	161
0.30	0.0044	191
0.40	0.0047	203
0.50	0.0048	207
0.60	0.0048	211
0.70	0.0049	215
0.80	0.0050	220
0.90	0.0051	224
1.00	0.0059	256
1.10	0.0064	280

Stage [ft]	Area [ac]	Area [ft2]
1.20	0.0068	295
1.30	0.0075	327
1.40	0.0077	335
1.50	0.0079	343
1.60	0.0080	351
1.70	0.0082	357
1.80	0.0083	363
1.90	0.0085	369
2.00	0.0086	375
2.10	0.0089	390
2.20	0.0093	404
2.30	0.0096	419
2.40	0.0108	471
2.50	0.0113	494
2.60	0.0121	527
2.70	0.0122	530
2.80	0.0123	534
2.90	0.0123	537
3.00	0.0124	541
3.10	0.0125	544
3.20	0.0126	548
3.30	0.0128	557
3.40	0.0132	575
3.50	0.0141	615
3.60	0.0147	640
3.70	0.0151	658
3.80	0.0154	672
3.90	0.0156	679
4.00	0.0157	684
4.10	0.0158	689
4.20	0.0159	694
4.30	0.0160	699
4.40	0.0165	717
4.50	0.0179	779
4.60	0.0186	809
4.69	0.0189	825
4.80	0.0194	843
4.90	0.0202	880
5.00	0.0204	889
5.10	0.0206	899
5.20	0.0216	941
5.29	0.0224	975
5.40	0.0231	1007
5.50	0.0238	1037
5.60	0.0247	1075
5.70	0.0275	1200
5.79	0.0310	1350
5.89	0.0367	1600
5.99	0.0494	2150

Stage [ft]	Area [ac]	Area [ft2]
6.09	0.0723	3150
6.19	0.0935	4074
6.29	0.1096	4774
6.39	0.1412	6149
6.49	0.1676	7299
6.59	0.2135	9299
6.69	0.2749	11973
6.79	0.3294	14348
6.89	0.4017	17498
6.99	0.4889	21297
7.09	0.6220	27096
7.19	0.7649	33321
7.29	0.9313	40570
7.39	1.1425	49768
7.49	1.4076	61317
7.59	1.7783	77465
7.69	2.2655	98687
7.79	2.7998	121959
7.89	3.2416	141206
7.99	3.6244	157879
8.09	4.0204	175127
8.19	4.6309	201723
8.29	5.0607	220446
8.39	5.5112	240068
8.49	5.9238	258041
8.59	6.3226	275413
8.69	6.7696	294886
8.79	7.2017	313708
8.89	7.6511	333280
8.99	8.1830	356452
9.09	8.7626	381699
9.19	9.3927	409145
9.29	9.9987	435542
9.39	10.5421	459214
9.49	11.0207	480061
9.59	11.4189	497409
9.69	11.7185	510457
9.79	11.9606	521005
9.89	12.1322	528479
9.99	12.2740	534654
10.09	12.4352	541678
10.19	12.5890	548377
10.29	12.7302	554526
10.39	12.8524	559850
10.49	12.9413	563725
10.59	13.0027	566399
10.69	13.0498	568449
10.79	13.0762	569599
10.89	13.0871	570074

Stage [ft]	Area [ac]	Area [ft2]
10.99	13.0916	570268
11.09	13.0916	570268

Comment:

Node: B-22

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.26 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.26	0.0006	25
3.30	0.0023	100
3.40	0.0043	187
3.50	0.0103	450
3.60	0.0241	1050
3.70	0.0637	2775
3.80	0.0987	4299
3.90	0.1199	5224
4.00	0.1475	6424
4.10	0.1716	7474
4.20	0.1934	8424
4.30	0.2117	9224
4.39	0.2267	9874
4.50	0.2389	10407
4.60	0.2445	10649
4.69	0.2525	10999
4.79	0.2617	11398
4.89	0.2686	11698
4.99	0.2732	11898
5.09	0.2800	12198
5.19	0.2875	12523
5.29	0.2944	12823
5.39	0.3036	13223
5.49	0.3214	13998
5.59	0.3449	15023
5.69	0.3873	16873
5.79	0.4660	20297
5.89	0.6031	26271
5.99	0.8355	36395
6.09	1.1936	51993
6.19	1.6429	71565
6.29	2.2064	96112
6.39	2.8859	125708

Stage [ft]	Area [ac]	Area [ft2]
6.49	3.7088	161553
6.59	4.6418	202198
6.69	5.5531	241893
6.79	6.3903	278363
6.89	7.1845	312958
6.99	7.8674	342704
7.09	8.4533	368226
7.19	9.0042	392223
7.29	9.4902	413395
7.39	9.9723	434392
7.49	10.4222	453989
7.59	10.8204	471337
7.69	11.1859	487260
7.79	11.5647	503758
7.89	11.9572	520855
7.99	12.3618	538478
8.09	12.8048	557776
8.19	13.2604	577623
8.29	13.7401	598520
8.39	14.2549	620942
8.49	14.8270	645864
8.59	15.4003	670835
8.69	16.0097	697382
8.79	16.6369	724703
8.89	17.2939	753324
8.99	18.0422	785920
9.09	18.7550	816966
9.19	19.4533	847387
9.29	20.1368	877158
9.39	20.7617	904379
9.49	21.3459	929826
9.59	21.9335	955422
9.69	22.5727	983269
9.79	23.1621	1008940
9.89	23.7331	1033812
9.99	24.2122	1054684
10.09	24.6558	1074007
10.19	25.0431	1090879
10.29	25.3897	1105977
10.39	25.6744	1118376
10.49	25.9160	1128899
10.59	26.0910	1136523
10.69	26.2321	1142672
10.79	26.3102	1146072
10.89	26.3825	1149222
10.99	26.4382	1151646
11.09	26.4829	1153596
11.19	26.5133	1154921
11.29	26.5278	1155551

Stage [ft]	Area [ac]	Area [ft2]
11.39	26.5278	1155551

Comment:

Node: B-23

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.01 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.01	0.0006	25
5.10	0.0026	112
5.20	0.0132	575
5.30	0.0390	1700
5.40	0.0666	2900
5.49	0.0970	4224
5.59	0.1360	5924
5.69	0.2026	8824
5.79	0.2932	12773
5.89	0.3845	16748
5.99	0.5021	21872
6.09	0.6840	29796
6.19	0.9675	42144
6.29	1.3009	56667
6.39	1.7313	75415
6.49	2.1295	92763
6.59	2.5111	109385
6.69	2.8755	125258
6.79	3.2032	139531
6.89	3.5091	152855
6.99	3.8379	167178
7.09	4.1988	182901
7.19	4.6298	201673
7.29	5.0854	221520
7.39	5.5284	240818
7.49	5.9479	259090
7.59	6.3358	275988
7.69	6.7077	292186
7.79	7.0824	308509
7.89	7.5013	326756
7.99	7.8554	342179
8.09	8.1905	356777
8.19	8.4619	368601
8.29	8.7276	380174

Stage [ft]	Area [ac]	Area [ft2]
8.39	8.9468	389723
8.49	9.1700	399447
8.59	9.3732	408295
8.69	9.5838	417469
8.79	9.8546	429268
8.89	10.0859	439341
8.99	10.2626	447040
9.09	10.3940	452765
9.19	10.4750	456289
9.29	10.5553	459789
9.39	10.6104	462188
9.49	10.6586	464288
9.59	10.7045	466288
9.69	10.7670	469012
9.79	10.8634	473212
9.89	10.9277	476011
9.99	10.9851	478511
10.09	11.0017	479236
10.19	11.0098	479586
10.30	11.0110	479638
10.40	11.0110	479638

Comment:

Node: B-24

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0009	39
4.30	0.0023	100
4.39	0.0052	225
4.49	0.0189	825
4.59	0.0367	1600
4.69	0.0821	3575
4.79	0.1446	6299
4.89	0.2990	13023
4.99	0.7529	32796
5.09	1.5723	68491
5.19	2.5329	110335
5.29	3.4155	148780
5.39	4.2792	186400

Stage [ft]	Area [ac]	Area [ft2]
5.49	5.3580	233394
5.59	6.7203	292736
5.69	8.5950	374400
5.79	10.9507	477011
5.89	13.4549	586097
5.99	15.5139	675785
6.09	17.0822	744101
6.19	18.2563	795244
6.29	19.0602	830264
6.39	19.7070	858435
6.49	20.2424	881757
6.59	20.7009	901730
6.69	21.1594	921702
6.79	21.6081	941249
6.89	22.2038	967196
6.99	22.9079	997867
7.09	23.6625	1030737
7.19	24.3545	1060883
7.29	25.0713	1092104
7.39	25.8569	1126325
7.49	26.7394	1164769
7.59	27.5795	1201365
7.69	28.5585	1244009
7.79	29.7269	1294902
7.89	30.9497	1348170
7.99	32.0331	1395364
8.09	33.0930	1441533
8.19	33.9762	1480002
8.29	34.9150	1520897
8.39	35.9462	1565816
8.49	37.2081	1620784
8.59	38.6157	1682100
8.69	40.1789	1750191
8.79	41.6129	1812658
8.89	42.7279	1861226
8.99	43.5404	1896622
9.09	44.0896	1920544
9.19	44.5194	1939266
9.29	44.8551	1953889
9.39	45.1288	1965812
9.49	45.3389	1974961
9.59	45.5150	1982635
9.69	45.6287	1987585
9.79	45.7526	1992984
9.89	45.8416	1996858
9.99	45.8835	1998683
10.09	45.8989	1999358
10.19	45.9133	1999983
10.29	45.9183	2000199

Stage [ft]	Area [ac]	Area [ft2]
10.39	45.9183	2000199

Comment:

Node: B-25

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.15 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.15	0.0006	25
4.20	0.0011	50
4.30	0.0040	175
4.40	0.0099	433
4.50	0.0126	550
4.59	0.0184	800
4.70	0.0218	950
4.80	0.0252	1100
4.90	0.0330	1437
4.99	0.0407	1775
5.09	0.0476	2075
5.19	0.0580	2525
5.29	0.0706	3075
5.39	0.1067	4649
5.49	0.1739	7574
5.59	0.2502	10899
5.69	0.3632	15823
5.79	0.4797	20897
5.89	0.5957	25947
5.99	0.6898	30046
6.09	0.8160	35545
6.19	0.9491	41344
6.29	1.1035	48069
6.39	1.2378	53918
6.49	1.4002	60992
6.59	1.5729	68516
6.69	1.7531	76365
6.79	1.8983	82689
6.89	2.0314	88488
6.99	2.1215	92413
7.09	2.2093	96237
7.19	2.3281	101411
7.29	2.4526	106836
7.39	2.6030	113385

Stage [ft]	Area [ac]	Area [ft2]
7.49	2.7774	120984
7.59	2.9851	130033
7.69	3.1745	138282
7.79	3.3426	145606
7.89	3.5188	153280
7.99	3.6577	159329
8.09	3.7661	164053
8.19	3.8694	168553
8.29	3.9544	172252
8.39	4.0163	174952
8.49	4.0248	175319
8.59	4.0248	175319

Comment:

Node: B-26

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.60	0.0011	50
2.70	0.0044	190
2.80	0.0080	350
2.90	0.0143	625
3.00	0.0228	994
3.10	0.0362	1575
3.20	0.0459	2000
3.30	0.0608	2650
3.40	0.0861	3750
3.50	0.1125	4899
3.60	0.1567	6824
3.70	0.2083	9074
3.80	0.2565	11173
3.90	0.3225	14048
4.00	0.4269	18598
4.10	0.5492	23922
4.20	0.6703	29196
4.30	0.8011	34895
4.40	0.9308	40545
4.50	1.0708	46644
4.60	1.1902	51843
4.70	1.3434	58517
4.80	1.5413	67141

Stage [ft]	Area [ac]	Area [ft2]
4.90	1.7629	76790
5.00	2.0056	87363
5.10	2.2655	98687
5.20	2.5226	109885
5.30	2.7728	120784
5.40	2.9846	130008
5.50	3.2095	139806
5.60	3.4614	150780
5.70	3.7036	161328
5.80	3.9664	172777
5.90	4.2516	185200
6.00	4.5167	196749
6.10	4.7715	207847
6.20	5.0085	218171
6.30	5.2501	228694
6.40	5.4750	238493
6.50	5.6948	248067
6.60	5.8779	256041
6.70	6.1160	266414
6.80	6.3553	276838
6.90	6.6296	288786
7.00	6.8620	298910
7.10	7.1271	310459
7.20	7.4020	322432
7.30	7.6304	332381
7.40	7.8548	342154
7.50	8.0585	351028
7.60	8.2720	360327
7.70	8.4631	368651
7.80	8.6323	376025
7.90	8.7867	382749
8.00	8.9187	388498
8.10	9.0421	393872
8.20	9.1442	398322
8.30	9.2395	402471
8.40	9.3301	406421
8.50	9.4065	409745
8.60	9.4707	412545
8.70	9.5207	414720
8.80	9.5723	416969
8.90	9.6308	419519
9.00	9.6779	421569
9.10	9.7261	423668
9.20	9.7577	425043
9.30	9.7918	426533
9.40	9.7918	426533

Comment:

Node: B-27

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.92 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.92	0.0006	25
4.00	0.0017	75
4.09	0.0086	375
4.19	0.0189	825
4.29	0.0362	1575
4.39	0.0677	2950
4.49	0.1085	4724
4.59	0.1555	6774
4.69	0.2049	8924
4.79	0.2519	10974
4.89	0.2944	12823
4.99	0.3391	14773
5.09	0.3793	16523
5.19	0.4390	19122
5.29	0.5170	22522
5.39	0.6261	27271
5.49	0.7494	32646
5.59	0.8545	37220
5.69	0.9796	42669
5.79	1.1190	48744
5.89	1.2550	54668
5.99	1.3767	59967
6.09	1.4725	64141
6.19	1.5586	67891
6.29	1.6596	72290
6.39	1.7227	75040
6.49	1.7505	76250
6.59	1.7505	76250

Comment:

Node: B-28

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.87 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.87	0.0006	25
3.90	0.0008	36
4.00	0.0029	125
4.09	0.0069	300
4.19	0.0235	1025
4.29	0.0534	2325
4.39	0.0809	3525
4.49	0.1222	5324
4.59	0.1481	6449
4.69	0.1888	8224
4.79	0.2238	9749
4.89	0.2622	11423
4.99	0.3082	13423
5.09	0.3472	15123
5.19	0.3937	17148
5.29	0.4321	18822
5.39	0.4740	20647
5.49	0.5182	22572
5.59	0.5538	24122
5.69	0.5997	26121
5.79	0.6576	28646
5.89	0.7368	32096
5.99	0.8568	37320
6.09	1.0323	44969
6.19	1.2458	54268
6.29	1.4455	62967
6.39	1.6263	70841
6.49	1.7583	76590
6.59	1.8529	80714
6.69	1.8736	81613
6.79	1.8736	81613

Comment:

Node: B-29

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.31 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.31	0.0006	25
4.40	0.0027	117
4.50	0.0075	325
4.60	0.0216	942

Stage [ft]	Area [ac]	Area [ft2]
4.69	0.0344	1500
4.79	0.0471	2050
4.89	0.0608	2650
4.99	0.0775	3375
5.09	0.1102	4799
5.19	0.1521	6624
5.29	0.2031	8849
5.39	0.2628	11448
5.49	0.3156	13748
5.59	0.3759	16373
5.69	0.4419	19247
5.79	0.4987	21722
5.89	0.5417	23597
5.99	0.5893	25672
6.09	0.6496	28296
6.19	0.7024	30596
6.29	0.7701	33546
6.39	0.8734	38045
6.49	0.9629	41944
6.59	1.0760	46869
6.69	1.2200	53143
6.79	1.3571	59117
6.89	1.5023	65441
6.99	1.6355	71241
7.09	1.7554	76465
7.19	1.8352	79939
7.29	1.8799	81889
7.39	1.9052	82989
7.50	1.9187	83579
7.60	1.9187	83579

Comment:

Node: B-3

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.60 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.00	0.0000	0
0.50	0.0000	0
1.00	3.8700	168577
1.50	7.8300	341075
2.00	11.8700	517057

Stage [ft]	Area [ac]	Area [ft2]
2.50	16.0000	696960
3.00	20.2200	880783
3.40	23.6600	1030630
3.90	28.0300	1220987
4.40	37.4400	1630886
4.90	52.8000	2299968
5.40	70.0800	3052685
5.90	89.2800	3889037
6.40	110.3900	4808588
6.90	132.4700	5770393

Comment:

Node: B-30

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.06 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.06	0.0006	25
4.10	0.0013	57
4.20	0.0039	169
4.30	0.0063	275
4.39	0.0103	450
4.49	0.0172	750
4.60	0.0281	1225
4.69	0.0396	1725
4.79	0.0539	2350
4.89	0.0786	3425
4.99	0.1383	6024
5.09	0.2163	9424
5.19	0.3001	13073
5.29	0.4005	17448
5.39	0.5515	24022
5.49	0.7282	31721
5.59	0.9750	42469
5.69	1.2498	54443
5.79	1.6108	70166
5.89	2.0538	89463
5.99	2.6988	117559
6.09	3.3926	147780
6.19	3.9521	172152
6.29	4.4255	192774
6.39	4.8926	213122

Stage [ft]	Area [ac]	Area [ft2]
6.49	5.3247	231944
6.59	5.6931	247992
6.69	5.9932	261065
6.79	6.2601	272689
6.89	6.4999	283137
6.99	6.6784	290911
7.09	6.8098	296635
7.19	6.9165	301285
7.29	6.9883	304409
7.39	7.0193	305759
7.50	7.0319	306309
7.59	7.0457	306909
7.69	7.0514	307159
7.80	7.0532	307238
7.90	7.0532	307238

Comment:

Node: B-31

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.05	2.5341	110385
0.10	2.5375	110535
0.20	2.5395	110623
0.30	2.5427	110760
0.40	2.5467	110935
0.50	2.5489	111030
0.60	2.5548	111285
0.70	2.5597	111502
0.80	2.5632	111653
0.90	2.5674	111835
1.00	2.5706	111977
1.10	2.5743	112135
1.20	2.5812	112435
1.30	2.5869	112685
1.40	2.5915	112885
1.50	2.5961	113085
1.60	2.6012	113310
1.70	2.6053	113485
1.80	2.6100	113693
1.90	2.6130	113820

Stage [ft]	Area [ac]	Area [ft2]
2.00	2.6156	113935
2.10	2.6210	114172
2.20	2.6290	114518
2.30	2.6328	114685
2.40	2.6365	114847
2.50	2.6407	115028
2.60	2.6471	115310
2.70	2.6556	115676
2.80	2.6601	115872
2.90	2.6695	116284
3.00	2.6758	116559
3.10	2.6821	116834
3.20	2.6879	117084
3.30	2.6976	117509
3.40	2.7080	117959
3.50	2.7180	118397
3.60	2.7286	118859
3.70	2.7499	119784
3.80	2.7682	120584
3.90	2.7831	121234
4.00	2.8084	122334
4.10	2.8273	123159
4.20	2.8457	123958
4.30	2.8732	125158
4.40	2.9002	126333
4.50	2.9306	127658
4.59	2.9668	129233
4.69	3.0201	131557
4.79	3.0706	133757
4.89	3.1424	136882
4.99	3.2428	141256
5.09	3.3358	145306
5.19	3.4362	149680
5.29	3.5492	154604
5.39	3.6801	160304
5.49	3.7960	165353
5.59	3.9297	171177
5.69	4.0525	176526
5.79	4.1896	182501
5.89	4.3526	189600
5.99	4.5500	198199
6.09	4.7377	206372
6.19	4.8995	213422
6.29	5.0693	220820
6.39	5.2403	228270
6.49	5.4234	236243
6.59	5.6007	243967
6.69	5.7717	251416
6.79	5.9290	258265

Stage [ft]	Area [ac]	Area [ft2]
6.89	6.0931	265415
6.99	6.2515	272314
7.09	6.4041	278963
7.19	6.5487	285262
7.29	6.7197	292711
7.39	6.9079	300910
7.49	7.1644	312083
7.59	7.5036	326856
7.69	7.9225	345104
7.79	8.4040	366076
7.89	8.8762	386648
7.99	9.3278	406321
8.09	9.7100	422969
8.19	10.1031	440091
8.29	10.5002	457389
8.39	10.8537	472787
8.49	11.1676	486460
8.59	11.4052	496809
8.69	11.4924	500610
8.79	11.4924	500610

Comment:

Node: B-32

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.00	0.0006	25
3.10	0.0063	275
3.21	0.0171	746
3.31	0.0267	1164
3.40	0.0344	1500
3.50	0.0689	3000
3.60	0.1222	5324
3.70	0.2077	9049
3.80	0.3001	13073
3.90	0.4005	17448
4.00	0.4792	20872
4.10	0.5693	24797
4.20	0.6565	28596
4.30	0.7431	32371
4.40	0.8464	36870

Stage [ft]	Area [ac]	Area [ft2]
4.50	0.9641	41994
4.60	1.0656	46419
4.70	1.1580	50443
4.80	1.2699	55318
4.90	1.3801	60117
5.00	1.5218	66291
5.10	1.6756	72990
5.20	1.8443	80339
5.30	2.0119	87638
5.40	2.1599	94087
5.50	2.3120	100712
5.60	2.4882	108386
5.70	2.7028	117734
5.80	3.0121	131207
5.90	3.4293	149380
6.00	3.8000	165528
6.10	4.1363	180176
6.20	4.4823	195249
6.30	4.8237	210122
6.40	5.1583	224695
6.50	5.5370	241193
6.60	5.9347	258515
6.70	6.4064	279063
6.80	6.9579	303085
6.90	7.6138	331656
7.00	8.3007	361577
7.10	8.9457	389673
7.20	9.5660	416694
7.30	10.1938	444041
7.40	10.8399	472187
7.50	11.4998	500933
7.60	12.2774	534804
7.70	13.2030	575123
7.80	14.1567	616668
7.90	15.1449	659712
8.00	16.2082	706031
8.10	17.3410	755374
8.20	18.4428	803368
8.30	19.4126	845612
8.40	20.2768	883257
8.50	21.0733	917952
8.60	21.8107	950073
8.70	22.5377	981744
8.80	23.1162	1006941
8.90	23.5598	1026263
9.00	23.8031	1036862
9.10	23.9620	1043786
9.20	24.0515	1047685
9.30	24.1187	1050610

Stage [ft]	Area [ac]	Area [ft2]
9.40	24.1726	1052959
9.50	24.2329	1055584
9.60	24.2834	1057784
9.70	24.3270	1059684
9.80	24.3643	1061308
9.90	24.4010	1062908
10.00	24.4412	1064658
10.10	24.4791	1066308
10.20	24.5164	1067932
10.30	24.5571	1069707
10.40	24.5915	1071207
10.50	24.6196	1072432
10.60	24.6437	1073481
10.70	24.6437	1073481

Comment:

Node: B-33

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.44 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.44	0.0006	25
4.50	0.0015	64
4.59	0.0046	200
4.69	0.0115	500
4.79	0.0218	950
4.89	0.0390	1700
4.99	0.0780	3400
5.09	0.1613	7024
5.19	0.3064	13348
5.29	0.5406	23547
5.39	0.8923	38870
5.49	1.3284	57867
5.59	1.8352	79939
5.69	2.2386	97512
5.79	2.6403	115010
5.89	3.0213	131607
5.99	3.3570	146230
6.09	3.6261	157954
6.19	3.8671	168452
6.29	4.0789	177676
6.39	4.3101	187750

Stage [ft]	Area [ac]	Area [ft2]
6.49	4.5552	198424
6.59	4.8341	210572
6.69	5.1009	222195
6.79	5.3270	232044
6.89	5.4997	239568
6.99	5.6661	246817
7.09	5.8148	253291
7.19	5.9479	259090
7.29	6.0673	264290
7.39	6.1843	269389
7.49	6.2727	273239
7.59	6.3616	277113
7.69	6.4236	279813
7.79	6.4477	280863
7.89	6.4644	281587
8.00	6.4705	281856
8.10	6.4705	281856

Comment:

Node: B-34

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 4.78 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
4.78	0.0006	25
4.80	0.0007	31
4.90	0.0013	56
5.00	0.0019	81
5.10	0.0027	119
5.20	0.0035	154
5.30	0.0043	189
5.40	0.0055	242
5.49	0.0080	350
5.60	0.0112	487
5.70	0.0149	650
5.79	0.0207	900
5.89	0.0281	1225
5.99	0.0350	1525
6.09	0.0465	2025
6.19	0.0625	2725
6.29	0.0872	3799
6.40	0.1171	5099

Stage [ft]	Area [ac]	Area [ft2]
6.49	0.1521	6624
6.59	0.2181	9499
6.69	0.2973	12948
6.79	0.4023	17523
6.89	0.5388	23472
6.99	0.7219	31446
7.09	0.9589	41769
7.19	1.2240	53318
7.29	1.4977	65241
7.39	1.7726	77215
7.49	2.0676	90063
7.59	2.3287	101436
7.69	2.5892	112785
7.79	2.8216	122909
7.89	3.0592	133257
7.99	3.2772	142756
8.09	3.5349	153979
8.19	3.8402	167278
8.29	4.2464	184975
8.39	4.7222	205698
8.49	5.2903	230444
8.59	5.9387	258690
8.69	6.6354	289036
8.79	6.9998	304909
8.89	7.1868	313058
8.99	7.3079	318332
9.09	7.3756	321282
9.19	7.4141	322957
9.29	7.4238	323382
9.40	7.4282	323571
9.50	7.4282	323571

Comment:

Node: B-35

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.58 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.58	0.0006	25
5.60	0.0006	28
5.70	0.0010	43
5.80	0.0016	71

Stage [ft]	Area [ac]	Area [ft2]
5.90	0.0022	94
6.00	0.0026	115
6.10	0.0036	158
6.19	0.0040	175
6.29	0.0080	350
6.39	0.0161	700
6.49	0.0344	1500
6.59	0.0666	2900
6.69	0.1027	4474
6.79	0.1704	7424
6.89	0.2743	11948
6.99	0.4539	19772
7.09	0.7024	30596
7.19	1.0610	46219
7.29	1.4742	64216
7.39	1.8966	82614
7.49	2.4193	105386
7.59	3.0764	134007
7.69	3.8792	168977
7.79	4.8702	212147
7.89	5.9944	261115
7.99	7.2689	316633
8.09	8.4281	367126
8.19	9.4879	413295
8.29	10.4233	454039
8.39	11.2049	488085
8.49	11.9142	518981
8.59	12.5351	546027
8.69	13.0762	569599
8.79	13.5571	590546
8.89	14.0466	611868
8.99	14.5510	633840
9.09	15.0875	657212
9.19	15.7296	685184
9.29	16.7224	728428
9.39	17.5017	762373
9.49	17.8976	779621
9.59	18.1846	792119
9.69	18.3607	799793
9.79	18.4795	804967
9.89	18.5644	808667
9.99	18.6293	811492
10.09	18.6597	812816
10.19	18.6827	813816
10.29	18.6913	814191
10.40	18.6993	814541
10.49	18.7022	814666
10.60	18.7062	814841
10.70	18.7071	814883

Stage [ft]	Area [ac]	Area [ft2]
10.80	18.7096	814991
10.90	18.7100	815006
11.00	18.7100	815006

Comment:

Node: B-36

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.94	0.0006	25
1.00	0.0011	50
1.10	0.0016	71
1.20	0.0041	180
1.30	0.0109	475
1.40	0.0157	683
1.50	0.0197	858
1.60	0.0250	1087
1.70	0.0293	1275
1.80	0.0339	1475
1.90	0.0407	1775
2.00	0.0488	2125
2.10	0.0614	2675
2.20	0.0729	3175
2.30	0.0835	3637
2.40	0.0935	4074
2.50	0.1010	4399
2.60	0.1044	4549
2.70	0.1096	4774
2.80	0.1136	4949
2.90	0.1166	5079
3.00	0.1199	5224
3.10	0.1245	5424
3.20	0.1262	5499
3.30	0.1328	5784
3.40	0.1360	5924
3.50	0.1377	5999
3.60	0.1417	6174
3.70	0.1475	6424
3.80	0.1547	6737
3.90	0.1584	6899
4.00	0.1611	7016

Stage [ft]	Area [ac]	Area [ft2]
4.10	0.1681	7324
4.20	0.1773	7724
4.30	0.2003	8724
4.40	0.2290	9974
4.50	0.2668	11623
4.60	0.3145	13698
4.70	0.3489	15198
4.80	0.3845	16748
4.89	0.4132	17998
4.99	0.4436	19322
5.09	0.4792	20872
5.19	0.5245	22847
5.29	0.5670	24697
5.39	0.5985	26072
5.49	0.6289	27396
5.59	0.6674	29071
5.69	0.7047	30696
5.79	0.7454	32471
5.89	0.7942	34595
5.99	0.8481	36945
6.09	0.9004	39220
6.19	0.9595	41794
6.29	1.0278	44769
6.39	1.1150	48569
6.49	1.2275	53468
6.59	1.3916	60617
6.69	1.6601	72315
6.79	2.1255	92588
6.89	2.7900	121534
6.99	3.5745	155704
7.09	4.5919	200023
7.19	5.6834	247567
7.29	6.8861	299960
7.39	8.1078	353178
7.49	9.4019	409545
7.59	10.8933	474512
7.69	12.5953	548652
7.79	14.2801	622042
7.89	15.9942	696707
7.99	17.6302	767972
8.09	19.3420	842537
8.19	21.1123	919652
8.29	22.9348	999042
8.39	24.7947	1080056
8.49	26.5885	1158195
8.59	28.4328	1238535
8.69	30.5475	1330647
8.79	32.8710	1431859
8.89	35.1365	1530546

Stage [ft]	Area [ac]	Area [ft2]
8.99	37.3722	1627933
9.09	39.3479	1713996
9.19	41.0132	1786536
9.29	42.3004	1842604
9.39	43.3212	1887073
9.49	44.1786	1924418
9.59	44.8511	1953714
9.69	45.5340	1983460
9.79	46.0900	2007682
9.89	46.5755	2028829
9.99	47.0415	2049126
10.09	47.4282	2065974
10.19	47.7295	2079097
10.29	48.0227	2091871
10.39	48.2425	2101444
10.49	48.4078	2108643
10.59	48.5782	2116067
10.69	48.7148	2122017
10.79	48.8399	2127466
10.89	48.9621	2132790
10.99	49.0511	2136665
11.09	49.1222	2139764
11.19	49.1905	2142739
11.29	49.2439	2145064
11.39	49.2772	2146513
11.49	49.3127	2148063
11.59	49.3500	2149688
11.69	49.3747	2150763
11.79	49.3879	2151338
11.89	49.4040	2152038
11.99	49.4235	2152888
12.09	49.4407	2153637
12.19	49.4505	2154062
12.29	49.4574	2154362
12.39	49.4631	2154612
12.49	49.4688	2154862
12.59	49.4728	2155037
12.70	49.4750	2155131
12.80	49.4772	2155229
12.90	49.4797	2155337
12.99	49.4815	2155412
13.09	49.4832	2155487
13.20	49.4845	2155543
13.30	49.4851	2155572
13.40	49.4859	2155607
13.50	49.4870	2155654
13.60	49.4883	2155712
13.69	49.4889	2155737
13.80	49.4898	2155776

Stage [ft]	Area [ac]	Area [ft2]
13.90	49.4904	2155802
14.00	49.4932	2155924
14.10	49.4932	2155924

Comment:

Node: B-37

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 5.85 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
5.85	0.0006	25
5.90	0.0007	29
6.00	0.0008	37
6.10	0.0010	45
6.20	0.0013	56
6.29	0.0017	75
6.39	0.0069	300
6.49	0.0344	1500
6.59	0.0763	3325
6.69	0.1343	5849
6.79	0.2186	9524
6.89	0.3701	16123
6.99	0.5601	24397
7.09	0.7902	34420
7.19	1.0438	45469
7.29	1.3003	56642
7.39	1.6073	70016
7.49	1.9763	86088
7.59	2.3671	103111
7.69	2.7866	121384
7.79	3.2250	140481
7.89	3.5860	156204
7.99	3.8884	169377
8.09	4.2040	183126
8.19	4.5248	197099
8.29	4.9224	214421
8.39	5.3040	231044
8.49	5.6725	247092
8.59	6.0380	263015
8.69	6.3559	276863
8.79	7.2511	315858
8.89	7.6287	332306

Stage [ft]	Area [ac]	Area [ft2]
8.99	7.8163	340480
9.09	7.9305	345454
9.19	8.0011	348528
9.29	8.0700	351528
9.39	8.1251	353928
9.49	8.1405	354602
9.59	8.1405	354602

Comment:

Node: B-38

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
1.80	0.0006	25
1.90	0.0029	125
2.00	0.0098	425
2.10	0.0321	1400
2.20	0.0947	4124
2.30	0.1785	7774
2.40	0.2720	11848
2.50	0.3449	15023
2.60	0.3977	17323
2.70	0.4350	18947
2.80	0.4717	20547
2.90	0.4987	21722
3.00	0.5342	23272
3.10	0.5566	24247
3.20	0.5710	24872
3.30	0.5830	25397
3.40	0.5899	25697
3.51	0.5962	25972
3.60	0.6043	26321
3.71	0.6134	26721
3.80	0.6249	27221
3.90	0.6352	27671
4.01	0.6450	28096
4.10	0.6513	28371
4.21	0.6589	28701
4.31	0.6657	28996
4.41	0.6720	29271
4.50	0.6777	29521

Stage [ft]	Area [ac]	Area [ft2]
4.61	0.6834	29771
4.70	0.6903	30071
4.80	0.6995	30471
4.90	0.7093	30896
5.00	0.7185	31296
5.10	0.7299	31796
5.20	0.7403	32246
5.30	0.7546	32871
5.40	0.7684	33471
5.50	0.7810	34020
5.60	0.7948	34620
5.70	0.8114	35345
5.80	0.8349	36370
5.90	0.8631	37595
6.00	0.8929	38895
6.10	0.9216	40145
6.20	0.9468	41244
6.30	0.9761	42519
6.40	0.9996	43544
6.50	1.0410	45344
6.60	1.0897	47469
6.70	1.1563	50368
6.80	1.2447	54218
6.90	1.3646	59442
7.00	1.5339	66816
7.10	1.7623	76765
7.20	2.0320	88513
7.30	2.3637	102961
7.40	2.7126	118159
7.50	3.1252	136132
7.60	3.6055	157054
7.70	4.1317	179976
7.80	4.6734	203573
7.90	5.2294	227795
8.00	5.7981	252566
8.10	6.3909	278388
8.20	7.0933	308984
8.30	7.8324	341179
8.40	8.5428	372125
8.50	9.2177	401521
8.60	9.9315	432617
8.70	10.7200	466963
8.80	11.6083	505657
8.90	12.5930	548552
9.00	13.6541	594771
9.10	14.8023	644789
9.20	15.9948	696732
9.30	17.2492	751375
9.40	18.3952	801293

Stage [ft]	Area [ac]	Area [ft2]
9.50	19.6444	855711
9.60	20.9097	910828
9.70	22.2307	968371
9.80	23.4611	1021964
9.90	24.6426	1073432
10.00	25.7949	1123625
10.10	26.7589	1165619
10.20	27.4481	1195640
10.30	28.1006	1224062
10.40	28.7169	1250908
10.50	29.3860	1280054
10.60	29.8646	1300901
10.70	30.1641	1313950
10.80	30.3793	1323323
10.90	30.5469	1330622
11.00	30.6760	1336247
11.10	30.7845	1340971
11.20	30.8711	1344745
11.30	30.9285	1347245
11.40	30.9698	1349045
11.50	31.0042	1350545
11.60	31.0306	1351695
11.70	31.0479	1352444
11.80	31.0679	1353319
11.90	31.0817	1353919
12.00	31.0915	1354344
12.11	31.0986	1354657
12.20	31.1035	1354869
12.30	31.1075	1355044
12.40	31.1093	1355119
12.51	31.1098	1355142
12.61	31.1104	1355169
12.71	31.1108	1355188
12.81	31.1118	1355230
12.91	31.1118	1355230

Comment:

Node: B-39

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.94 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.94	0.0006	25
4.00	0.0010	44
4.10	0.0015	64
4.20	0.0020	86
4.29	0.0046	200
4.39	0.0184	800
4.49	0.0425	1850
4.59	0.0780	3400
4.69	0.1228	5349
4.79	0.1699	7399
4.89	0.2422	10549
4.99	0.3225	14048
5.09	0.4155	18098
5.19	0.5417	23597
5.29	0.6714	29246
5.39	0.8045	35045
5.49	0.9388	40895
5.59	1.0656	46419
5.69	1.1689	50918
5.79	1.2670	55193
5.89	1.3755	59917
5.99	1.4478	63067
6.09	1.5230	66341
6.19	1.5804	68841
6.29	1.6332	71140
6.39	1.6883	73540
6.49	1.7393	75765
6.59	1.7841	77715
6.69	1.8329	79839
6.79	1.8748	81664
6.89	1.9373	84389
6.99	2.0067	87413
7.09	2.0773	90488
7.19	2.1496	93637
7.29	2.2214	96762
7.39	2.2902	99762
7.49	2.3757	103486
7.59	2.4796	108011
7.69	2.5909	112860
7.79	2.6965	117459
7.89	2.8004	121984
7.99	2.9082	126683
8.09	3.0442	132607
8.19	3.1802	138532
8.29	3.3099	144181
8.39	3.4522	150380
8.49	3.5963	156654
8.59	3.7208	162078
8.69	3.8562	167978

Stage [ft]	Area [ac]	Area [ft2]
8.79	4.0008	174277
8.89	4.1437	180501
8.99	4.2751	186225
9.09	4.3911	191274
9.19	4.4921	195674
9.29	4.5976	200273
9.39	4.7101	205173
9.49	4.8214	210022
9.59	4.9201	214321
9.69	5.0177	218571
9.79	5.1078	222495
9.89	5.1904	226095
9.99	5.2484	228619
10.09	5.3264	232019
10.19	5.3798	234344
10.29	5.4320	236618
10.39	5.4647	238043
10.49	5.4911	239193
10.59	5.5175	240343
10.69	5.5502	241768
10.79	5.5841	243243
10.89	5.6174	244692
10.99	5.6484	246042
11.09	5.6828	247542
11.19	5.7120	248817
11.29	5.7499	250467
11.39	5.7832	251916
11.49	5.8176	253416
11.59	5.8498	254816
11.69	5.8808	256166
11.79	5.9089	257391
11.89	5.9433	258890
11.99	5.9777	260390
12.09	6.0116	261865
12.19	6.0455	263340
12.29	6.0741	264590
12.39	6.1046	265915
12.49	6.1344	267214
12.59	6.1671	268639
12.69	6.1998	270064
12.79	6.2331	271514
12.89	6.2647	272889
12.99	6.2974	274313
13.09	6.3255	275538
13.19	6.3593	277013
13.29	6.3915	278413
13.39	6.4196	279638
13.49	6.4558	281212
13.59	6.4908	282737

Stage [ft]	Area [ac]	Area [ft2]
13.69	6.5229	284137
13.79	6.5567	285612
13.89	6.5889	287012
13.99	6.6296	288786
14.09	6.6623	290211
14.19	6.7128	292411
14.29	6.7570	294336
14.39	6.7909	295811
14.49	6.8259	297335
14.59	6.8683	299185
14.69	6.9102	301010
14.79	6.9366	302160
14.89	6.9693	303584
14.99	6.9940	304659
15.09	7.0204	305809
15.19	7.0480	307009
15.29	7.0703	307984
15.39	7.0841	308584
15.49	7.0884	308772
15.59	7.0884	308772

Comment:

Node: B-4

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.24	0.0006	25
2.30	0.0012	54
2.40	0.0016	68
2.50	0.0023	100
2.60	0.0036	158
2.70	0.0051	221
2.80	0.0065	284
2.90	0.0081	354
3.00	0.0098	425
3.10	0.0138	600
3.20	0.0218	950
3.30	0.0284	1237
3.40	0.0350	1525
3.50	0.0453	1975
3.60	0.0637	2775

Stage [ft]	Area [ac]	Area [ft2]
3.70	0.1021	4449
3.80	0.1492	6499
3.90	0.2324	10124
4.00	0.3208	13973
4.10	0.4304	18747
4.20	0.5595	24372
4.30	0.7185	31296
4.40	0.8963	39045
4.50	1.0897	47469
4.59	1.2745	55518
4.69	1.5345	66841
4.79	1.8197	79264
4.89	2.1422	93313
4.99	2.4939	108636
5.09	2.9140	126933
5.19	3.4098	148530
5.29	4.0169	174977
5.39	4.6413	202173
5.49	5.4946	239343
5.59	6.2463	272089
5.69	7.1581	311808
5.79	8.1176	353603
5.89	8.9485	389798
5.99	9.7140	423143
6.09	10.5255	458489
6.19	11.3237	493259
6.29	12.1150	527730
6.39	12.9092	562325
6.49	13.7327	598195
6.59	14.6170	636715
6.69	15.6309	680884
6.79	16.6753	726378
6.89	17.7869	774797
6.99	19.1291	833264
7.09	20.4145	889256
7.19	21.5536	938875
7.29	22.5722	983244
7.39	23.6034	1028163
7.49	24.5261	1068357
7.59	25.2457	1099703
7.69	25.9303	1129524
7.79	26.6235	1159720
7.89	27.3563	1191641
7.99	28.1379	1225686
8.09	28.8271	1255707
8.19	29.3940	1280404
8.29	30.0184	1307600
8.39	30.7093	1337696
8.49	31.3572	1365918

Stage [ft]	Area [ac]	Area [ft2]
8.59	31.9826	1393164
8.69	32.6265	1421210
8.79	33.1774	1445207
8.89	33.6479	1465704
8.99	34.0835	1484677
9.09	34.4674	1501400
9.19	34.7887	1515398
9.29	35.0980	1528871
9.39	35.3746	1540919
9.49	35.5399	1548118
9.59	35.5735	1549582
9.69	35.5735	1549582

Comment:

Node: B-40

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.90 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.90	0.0006	25
4.01	0.0007	32
4.11	0.0009	39
4.21	0.0011	46
4.30	0.0023	100
4.40	0.0109	475
4.50	0.0316	1375
4.60	0.0574	2500
4.70	0.1148	4999
4.80	0.1813	7899
4.90	0.2542	11074
5.00	0.3277	14273
5.10	0.4040	17598
5.20	0.4992	21747
5.30	0.6352	27671
5.40	0.8395	36570
5.50	1.2395	53993
5.60	1.8495	80564
5.70	2.6311	114610
5.80	3.3742	146980
5.90	4.0358	175802
6.00	4.6430	202248
6.10	5.2690	229519

Stage [ft]	Area [ac]	Area [ft2]
6.20	5.9594	259590
6.30	6.6623	290211
6.40	7.3992	322307
6.50	8.3276	362752
6.60	9.5166	414545
6.70	10.8336	471912
6.80	12.3101	536228
6.90	13.8142	601745
7.00	15.1581	660287
7.10	16.2036	705831
7.20	17.0019	740601
7.30	17.5562	764748
7.40	17.9298	781021
7.50	18.1920	792444
7.60	18.4261	802643
7.70	18.6431	812092
7.80	18.8187	819741
7.90	18.9960	827464
8.00	19.1389	833689
8.10	19.2226	837338
8.20	19.3001	840713
8.30	19.3632	843462
8.40	19.4183	845862
8.50	19.4301	846373
8.60	19.4301	846373

Comment: This basin doesn't belong in this Town's model.

Node: B-5

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
2.66	0.0011	50
2.70	0.0029	125
2.80	0.0075	325
2.90	0.0115	500
3.00	0.0218	950
3.10	0.0379	1650
3.20	0.0511	2225
3.30	0.0620	2700
3.40	0.0717	3125
3.50	0.0809	3525

Stage [ft]	Area [ac]	Area [ft2]
3.60	0.0901	3924
3.70	0.0998	4349
3.80	0.1165	5074
3.90	0.1380	6012
4.00	0.1561	6799
4.10	0.1871	8149
4.20	0.2192	9549
4.30	0.2611	11373
4.39	0.3214	13998
4.49	0.3954	17223
4.59	0.4786	20847
4.69	0.5767	25122
4.79	0.6748	29396
4.89	0.7976	34745
4.99	0.9371	40820
5.09	1.0524	45844
5.19	1.1815	51468
5.29	1.3319	58017
5.39	1.5052	65566
5.49	1.6888	73565
5.59	1.8989	82714
5.69	2.1358	93038
5.79	2.4365	106136
5.89	2.7717	120734
5.99	3.1780	138432
6.09	3.7386	162853
6.19	4.3916	191299
6.29	5.0475	219871
6.39	5.8171	253391
6.49	6.5103	283587
6.59	7.2006	313658
6.69	7.8783	343179
6.79	8.5153	370925
6.89	9.1253	397497
6.99	9.7100	422969
7.09	10.2282	445541
7.19	10.7297	467388
7.29	11.2261	489010
7.39	11.7793	513106
7.49	12.4077	540478
7.59	13.0934	570349
7.69	13.8010	601170
7.79	14.7289	641589
7.89	15.4158	671510
7.99	15.9420	694432
8.09	16.3833	713655
8.19	16.7718	730577
8.29	17.1229	745875
8.39	17.3909	757549

Stage [ft]	Area [ac]	Area [ft2]
8.49	17.6681	769622
8.59	17.9338	781196
8.69	18.2041	792969
8.79	18.4795	804967
8.89	18.7653	817416
8.99	19.0918	831639
9.09	19.3982	844987
9.19	19.6909	857735
9.29	19.9554	869259
9.39	20.1752	878833
9.49	20.3887	888131
9.59	20.6842	901005
9.69	21.1295	920402
9.79	21.4784	935600
9.89	21.6529	943199
9.99	21.7028	945374
10.09	21.7344	946749
10.19	21.7539	947598
10.29	21.7705	948323
10.39	21.7741	948481
10.49	21.7741	948481

Comment:

Node: B-6

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
0.28	0.0006	25
0.30	0.0007	29
0.40	0.0011	49
0.50	0.0016	69
0.60	0.0033	146
0.70	0.0046	200
0.80	0.0075	325
0.89	0.0132	575
1.00	0.0207	900
1.09	0.0310	1350
1.20	0.0511	2225
1.30	0.0683	2975
1.40	0.0844	3675
1.50	0.1044	4549

Stage [ft]	Area [ac]	Area [ft2]
1.60	0.1182	5149
1.70	0.1337	5824
1.80	0.1526	6649
1.90	0.1796	7824
2.00	0.2158	9399
2.10	0.2611	11373
2.20	0.3294	14348
2.30	0.4155	18098
2.40	0.5239	22822
2.50	0.6347	27646
2.60	0.7712	33596
2.70	0.9164	39920
2.80	1.0576	46069
2.90	1.2171	53018
3.00	1.3692	59642
3.10	1.5482	67441
3.20	1.7410	75840
3.30	1.9436	84664
3.40	2.1622	94187
3.50	2.3820	103761
3.60	2.6093	113660
3.70	2.8325	123384
3.80	3.0649	133507
3.90	3.2864	143156
4.00	3.5326	153879
4.10	3.7994	165503
4.20	4.0336	175702
4.30	4.2912	186925
4.40	4.5615	198698
4.50	4.8432	210972
4.59	5.0602	220421
4.69	5.3230	231869
4.79	5.5508	241793
4.89	5.7780	251691
4.99	6.0047	261565
5.09	6.2285	271314
5.19	6.4230	279788
5.29	6.6411	289286
5.39	6.8603	298835
5.49	7.0721	308059
5.59	7.2729	316808
5.69	7.5099	327131
5.79	7.7142	336030
5.89	7.9156	344804
5.99	8.1509	355053
6.09	8.4017	365976
6.19	8.6536	376950
6.29	8.9416	389498
6.39	9.2814	404296

Stage [ft]	Area [ac]	Area [ft2]
6.49	9.6498	420344
6.59	10.0641	438391
6.69	10.4887	456889
6.79	10.9891	478686
6.89	11.5699	503983
6.99	12.2349	532954
7.09	13.0435	568174
7.19	13.7792	600220
7.29	14.5642	634415
7.39	15.3521	668736
7.49	16.1158	702006
7.59	16.8091	732202
7.69	17.5384	763973
7.79	18.3045	797344
7.89	19.1572	834489
7.99	20.0926	875233
8.09	21.0848	918452
8.19	22.0758	961622
8.29	23.1449	1008190
8.39	24.2059	1054409
8.49	25.3955	1106227
8.59	26.5277	1155546
8.69	27.5394	1199615
8.79	28.4925	1241134
8.89	29.4399	1282404
8.99	30.5073	1328898
9.09	31.7565	1383315
9.19	32.9708	1436208
9.29	34.0565	1483502
9.39	34.9821	1523822
9.49	35.8154	1560117
9.59	36.4678	1588538
9.69	36.9935	1611435
9.79	37.4393	1630857
9.89	37.7968	1646430
9.99	38.1457	1661628
10.09	38.4711	1675801
10.19	38.7523	1688050
10.29	39.0111	1699323
10.39	39.2596	1710147
10.49	39.4966	1720470
10.59	39.7209	1730244
10.69	39.9356	1739593
10.79	40.1112	1747242
10.89	40.2741	1754341
10.99	40.4434	1761715
11.09	40.6379	1770189
11.19	40.8089	1777638
11.29	40.9868	1785387

Stage [ft]	Area [ac]	Area [ft2]
11.39	41.1670	1793236
11.49	41.3082	1799385
11.59	41.4591	1805959
11.69	41.6204	1812983
11.79	41.7506	1818657
11.89	41.8992	1825131
11.99	42.0358	1831080
12.09	42.1621	1836580
12.19	42.2963	1842429
12.29	42.4151	1847603
12.39	42.5362	1852878
12.49	42.6504	1857852
12.59	42.7749	1863276
12.69	42.9023	1868825
12.79	43.0314	1874450
12.89	43.1560	1879874
12.99	43.2684	1884773
13.09	43.4039	1890673
13.19	43.5227	1895847
13.29	43.6443	1901146
13.39	43.7597	1906170
13.49	43.8836	1911570
13.59	44.0007	1916669
13.69	44.1103	1921443
13.79	44.2227	1926343
13.89	44.3467	1931742
13.99	44.4666	1936966
14.09	44.5923	1942441
14.19	44.7157	1947815
14.29	44.8413	1953289
14.39	44.9584	1958388
14.49	45.0893	1964088
14.59	45.2057	1969162
14.69	45.3291	1974536
14.79	45.4370	1979236
14.89	45.5409	1983760
14.99	45.6264	1987485
15.09	45.7182	1991484
15.19	45.8111	1995534
15.29	45.9144	2000033
15.39	46.0189	2004582
15.49	46.1118	2008632
15.59	46.2060	2012731
15.69	46.3110	2017306
15.79	46.4022	2021280
15.89	46.5055	2025779
15.99	46.6008	2029929
16.09	46.7006	2034278
16.19	46.7982	2038528

Stage [ft]	Area [ac]	Area [ft2]
16.29	46.9003	2042977
16.39	47.0099	2047752
16.49	47.1132	2052251
16.59	47.1993	2056000
16.69	47.3008	2060425
16.79	47.3823	2063974
16.89	47.4736	2067949
16.99	47.5677	2072048
17.09	47.6566	2075923
17.19	47.7364	2079397
17.29	47.8230	2083172
17.39	47.9028	2086646
17.49	47.9831	2090146
17.59	48.0635	2093645
17.69	48.1547	2097620
17.79	48.2356	2101144
17.89	48.3217	2104894
17.99	48.3969	2108168
18.09	48.4887	2112168
18.19	48.5736	2115867
18.29	48.6454	2118992
18.39	48.7326	2122792
18.49	48.8141	2126341
18.59	48.9053	2130316
18.69	49.0281	2135665
18.79	49.1303	2140114
18.89	49.2290	2144414
19.00	49.3179	2148288
19.10	49.3891	2151388
19.20	49.4539	2154212
19.30	49.5314	2157587
19.40	49.5997	2160561
19.50	49.6685	2163561
19.60	49.7288	2166186
19.70	49.7976	2169185
19.80	49.8562	2171735
19.90	49.9176	2174410
20.00	49.9801	2177134
20.10	50.0484	2180109
20.20	50.1121	2182884
20.30	50.1712	2185458
20.40	50.2384	2188383
20.50	50.2917	2190707
20.60	50.3583	2193607
20.70	50.4237	2196457
20.80	50.4880	2199256
20.90	50.5459	2201781
21.00	50.6102	2204581
21.10	50.6739	2207355

Stage [ft]	Area [ac]	Area [ft2]
21.20	50.7456	2210480
21.30	50.8099	2213279
21.40	50.8782	2216254
21.50	50.9362	2218779
21.60	51.0159	2222253
21.70	51.0664	2224453
21.80	51.1318	2227303
21.90	51.1972	2230152
22.00	51.2764	2233602
22.10	51.3442	2236551
22.20	51.4119	2239501
22.30	51.4813	2242526
22.40	51.5439	2245250
22.50	51.6064	2247975
22.60	51.6684	2250674
22.70	51.7464	2254074
22.80	51.8107	2256874
22.90	51.8738	2259623
23.00	51.9387	2262448
23.10	52.0001	2265123
23.20	52.0672	2268047
23.30	52.1366	2271072
23.40	52.2141	2274446
23.50	52.2824	2277421
23.60	52.3581	2280720
23.70	52.4304	2283870
23.80	52.4982	2286820
23.90	52.5751	2290169
24.00	52.6491	2293394
24.10	52.7139	2296218
24.20	52.7971	2299843
24.30	52.8660	2302842
24.40	52.9394	2306042
24.50	53.0152	2309342
24.60	53.0915	2312666
24.70	53.1621	2315741
24.80	53.2413	2319190
24.90	53.3176	2322515
25.00	53.3847	2325439
25.10	53.4588	2328664
25.20	53.5362	2332039
25.30	53.6137	2335413
25.40	53.6963	2339013
25.50	53.7681	2342137
25.60	53.8444	2345462
25.70	53.9201	2348761
25.80	53.9930	2351936
25.90	54.0636	2355011
26.00	54.1371	2358210

Stage [ft]	Area [ac]	Area [ft2]
26.10	54.2111	2361435
26.20	54.2891	2364834
26.30	54.3649	2368134
26.40	54.4429	2371533
26.50	54.5187	2374833
26.60	54.5933	2378082
26.70	54.6765	2381707
26.80	54.7666	2385631
26.90	54.8440	2389006
27.00	54.9301	2392756
27.10	55.0202	2396680
27.20	55.1069	2400454
27.30	55.1883	2404004
27.40	55.2744	2407753
27.50	55.3714	2411978
27.60	55.4649	2416052
27.70	55.5562	2420027
27.80	55.6509	2424151
27.90	55.7346	2427801
28.00	55.8242	2431700
28.10	55.9252	2436100
28.20	56.0376	2440999
28.30	56.1501	2445898
28.40	56.2362	2449648
28.50	56.3469	2454472
28.60	56.4451	2458747
28.70	56.5575	2463646
28.80	56.6683	2468470
28.90	56.7676	2472795
29.00	56.8892	2478094
29.10	56.9988	2482868
29.20	57.1119	2487793
29.30	57.2295	2492917
29.40	57.3477	2498066
29.50	57.4699	2503391
29.60	57.5836	2508340
29.70	57.7006	2513439
29.80	57.8229	2518764
29.90	57.9439	2524038
30.00	58.0708	2529562
30.10	58.2033	2535336
30.20	58.3301	2540861
30.30	58.4598	2546510
30.40	58.6107	2553084
30.50	58.7479	2559058
30.60	58.8724	2564483
30.70	58.9906	2569632
30.80	59.1146	2575031
30.90	59.2093	2579156

Stage [ft]	Area [ac]	Area [ft2]
31.00	59.3108	2583580
31.10	59.3935	2587180
31.20	59.4600	2590079
31.30	59.5409	2593604
31.40	59.5932	2595878
31.50	59.6477	2598253
31.60	59.6901	2600103
31.70	59.7452	2602502
31.80	59.7877	2604352
31.90	59.8325	2606302
32.00	59.8772	2608252
32.10	59.9203	2610126
32.20	59.9507	2611451
32.30	60.0006	2613626
32.40	60.0258	2614726
32.50	60.0597	2616201
32.60	60.0924	2617625
32.70	60.1211	2618875
32.80	60.1527	2620250
32.90	60.1681	2620921
33.00	60.1681	2620921

Comment:

Node: B-7

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 0.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.83	2.0400	88863
-1.80	2.0406	88888
-1.70	2.0423	88963
-1.60	3.4543	150467
-1.49	3.4660	150980
-1.40	4.9477	215521
-1.29	4.9603	216071
-1.19	4.9672	216371
-1.09	4.9747	216696
-0.99	4.9867	217221
-0.89	4.9970	217671
-0.79	5.0108	218271
-0.69	5.0240	218846
-0.59	5.0355	219346

Stage [ft]	Area [ac]	Area [ft2]
-0.49	5.0464	219821
-0.39	5.0596	220396
-0.29	5.0688	220796
-0.19	5.0837	221445
-0.09	5.0963	221995
0.00	5.1152	222820
0.10	5.1342	223645
0.20	5.1566	224620
0.30	5.1778	225545
0.40	5.1939	226245
0.50	5.2082	226870
0.60	5.2243	227570
0.70	5.2398	228245
0.80	5.2576	229019
0.90	5.2754	229794
1.00	5.2937	230594
1.10	5.3075	231194
1.20	5.3207	231769
1.30	5.3402	232619
1.40	5.3695	233894
1.50	5.3844	234544
1.60	5.4010	235269
1.70	5.4343	236718
1.80	5.4630	237968
1.90	5.4957	239393
2.00	5.5227	240568
2.10	5.5462	241593
2.20	5.5726	242743
2.30	5.5984	243867
2.40	5.6420	245767
2.50	5.7138	248892
2.60	5.7947	252416
2.70	5.9066	257291
2.80	6.1057	265964
2.90	6.3542	276788
3.00	6.6566	289961
3.10	7.0898	308834
3.20	7.6425	332906
3.30	8.2863	360952
3.40	8.9445	389623
3.50	9.6601	420794
3.60	10.3631	451415
3.70	11.1418	485335
3.80	11.9589	520930
3.90	12.9631	564675
4.00	14.0776	613218
4.10	15.2809	665636
4.20	16.7557	729878
4.30	18.5960	810042

Stage [ft]	Area [ac]	Area [ft2]
4.40	20.3996	888606
4.50	22.2084	967396
4.60	23.9942	1045185
4.70	25.6480	1117226
4.80	27.2806	1188341
4.89	28.6205	1246709
4.99	30.4040	1324398
5.09	32.0498	1396089
5.19	33.7248	1469054
5.29	35.3368	1539269
5.39	36.7352	1600186
5.49	37.8577	1649080
5.59	38.5520	1679326
5.69	39.0231	1699848
5.79	39.4759	1719570
5.89	39.8483	1735793
5.99	40.1863	1750516
6.09	40.4778	1763215
6.19	40.7378	1774538
6.29	40.9381	1783262
6.39	41.0901	1789886
6.49	41.2147	1795310
6.59	41.3415	1800835
6.69	41.4671	1806309
6.79	41.5986	1812033
6.89	41.7449	1818407
6.99	41.8683	1823781
7.09	41.9905	1829106
7.19	42.1213	1834805
7.29	42.2556	1840654
7.39	42.3359	1844154
7.49	42.3956	1846753
7.59	42.4433	1848828
7.69	42.4811	1850478
7.79	42.5167	1852028
7.89	42.5511	1853527
7.99	42.5879	1855127
8.09	42.5933	1855365
8.19	42.5933	1855365

Comment: Normal water levels at 2.00 NGVD or 0.5 NAVD

Node: B-8

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs

Initial Stage: 3.67 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
3.67	0.0006	25
3.70	0.0013	58
3.80	0.0020	87
3.90	0.0025	108
4.00	0.0034	150
4.09	0.0046	200
4.20	0.0071	308
4.30	0.0098	425
4.39	0.0121	525
4.49	0.0189	825
4.60	0.0362	1575
4.69	0.0482	2100
4.79	0.0671	2925
4.89	0.0889	3874
4.99	0.1228	5349
5.09	0.1750	7624
5.19	0.2634	11473
5.29	0.3896	16973
5.39	0.5463	23797
5.49	0.7035	30646
5.59	0.8906	38795
5.69	1.1414	49718
5.79	1.4220	61942
5.89	1.7726	77215
5.99	2.1749	94737
6.09	2.5393	110610
6.19	2.8709	125058
6.29	3.2221	140356
6.39	3.5343	153954
6.49	3.8161	166228
6.59	4.0416	176051
6.69	4.2321	184350
6.79	4.3836	190949
6.89	4.4961	195849
6.99	4.5621	198723
7.09	4.5965	200223
7.19	4.6200	201248
7.30	4.6281	201598
7.40	4.6328	201806
7.50	4.6361	201948
7.60	4.6381	202036
7.70	4.6392	202083
7.80	4.6433	202263
7.90	4.6433	202263

Comment:

Node: B-9

Scenario: Proposed
Type: Stage/Area
Base Flow: 0.00 cfs
Initial Stage: 3.09 ft
Warning Stage: 0.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-1.33	0.0109	475
-1.30	0.0109	476
-1.20	0.0110	479
-1.10	0.0111	483
-1.00	0.0112	486
-0.90	0.0112	489
-0.80	0.0113	493
-0.70	0.0114	496
-0.60	0.0115	500
-0.50	0.0117	508
-0.40	0.0119	516
-0.30	0.0121	525
-0.20	0.0125	544
-0.10	0.0129	562
0.00	0.0133	578
0.10	0.0137	595
0.20	0.0145	629
0.30	0.0150	652
0.40	0.0153	668
0.50	0.0159	694
0.60	0.0169	737
0.70	0.0177	770
0.80	0.0181	790
0.90	0.0191	830
1.00	0.0201	875
1.09	0.0207	900
1.20	0.0230	1002
1.30	0.0232	1010
1.40	0.0234	1018
1.50	0.0237	1031
1.60	0.0243	1060
1.70	0.0247	1075
1.80	0.0249	1085
1.90	0.0252	1096
2.00	0.0253	1104
2.10	0.0255	1110
2.20	0.0256	1116
2.30	0.0258	1122
2.40	0.0265	1156
2.50	0.0269	1172
2.60	0.0277	1206
2.70	0.0279	1217

Stage [ft]	Area [ac]	Area [ft2]
2.80	0.0298	1300
2.90	0.0303	1321
3.00	0.0308	1341
3.10	0.0311	1354
3.20	0.0312	1360
3.30	0.0314	1367
3.40	0.0315	1373
3.50	0.0321	1400
3.60	0.0333	1450
3.70	0.0362	1575
3.80	0.0390	1700
3.90	0.0499	2175
4.00	0.0648	2825
4.10	0.0821	3575
4.20	0.1079	4699
4.30	0.1343	5849
4.40	0.1773	7724
4.50	0.2163	9424
4.59	0.2473	10774
4.69	0.2875	12523
4.79	0.3311	14423
4.89	0.3644	15873
4.99	0.3937	17148
5.09	0.4310	18772
5.19	0.4608	20072
5.29	0.5079	22122
5.39	0.5647	24597
5.49	0.6255	27246
5.59	0.7317	31871
5.69	0.8436	36745
5.79	1.0455	45544
5.89	1.2510	54493
5.99	1.4117	61492
6.09	1.5281	66566
6.19	1.6343	71191
6.29	1.7095	74465
6.39	1.7560	76490
6.49	1.7910	78015
6.59	1.8243	79464
6.69	1.8478	80489
6.79	1.8673	81339
6.89	1.8845	82089
7.00	1.8977	82664
7.09	1.9098	83189
7.19	1.9230	83764
7.29	1.9367	84364
7.39	1.9539	85114
7.49	1.9654	85614
7.59	1.9662	85648

Stage [ft]	Area [ac]	Area [ft2]
7.69	1.9662	85648

Comment:

Node: DISCHARGE TO GOLF COURSE

Scenario: Proposed
Type: Time/Stage
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft
Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	0.00
0	0	0	10.0000	0.99
0	0	0	20.0000	1.79
0	0	0	30.0000	2.15
0	0	0	40.0000	2.55
0	0	0	50.0000	2.53
0	0	0	60.0000	3.22
0	0	0	64.0000	4.81
0	0	0	70.0000	4.50
0	0	0	80.0000	3.42
0	0	0	90.0000	2.71
0	0	0	96.0000	2.50

Comment: BASED ON PREVIOUS STUDY CONDUCTED FOR THE GOLF COURSE.
USED PREVIOUS DATA AS A BASIS FOR THE TAILWATER CONDITIONS FROM HH ICPR MODEL

Node: STORAGE ON 52ND

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.62	0.86	37462
4.23	1.72	74923

Comment: Approx. 1980 LF of 5'x5' Exfil running along SW 52nd St

1.72 ac-ft

Node: STORAGE ON SITE 19

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.66	0.11	4574
3.32	0.21	9148

Comment: SW 31ST ST DRAINAGE IMPROVEMENTS

https://dpep.broward.org/Enviros/Default.aspx?PossePresentation=SurfaceWaterLicense&PosseObjectId=33557971

0.21 AC-FT
TOP OF TRENCH: 3.32 NAVD

WT:2

BOT OF TRENCH: -0.93 NAVD

Node: STORAGE ON SITE 1

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.50	2.68	116741
4.00	4.34	189050
5.00	7.80	339768
6.00	11.37	495277
7.00	16.69	727016
8.00	25.49	1110344
9.00	37.78	1645697
10.00	53.55	2332638
11.00	71.07	3095809

Comment:

Node: STORAGE ON SITE 11

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.00	0.39	16988
3.50	0.78	33977

Comment: NEED MORE INFORMATION

Node: STORAGE ON SITE 12

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
9.20	0.04	1742
9.40	0.16	6970
9.60	0.36	15682
9.80	0.61	26572
10.00	0.93	40511
10.20	1.28	55757
10.40	1.64	71438
10.60	2.00	87120
10.80	2.36	102802

Comment:

Node: STORAGE ON SITE 13

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.00	0.00	0
5.00	0.09	3920
6.00	0.18	7841
7.00	0.27	11761

Stage [ft]	Volume [ac-ft]	Volume [ft3]
8.00	0.36	15682
9.00	0.49	21344
10.00	0.71	30928
11.00	1.65	71874
12.00	3.20	139392

Comment: K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2004 Apartment complex discharging to onsite retention\Calculations - Revised .pdf.pdf

Node: STORAGE ON SITE 14

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	0.27	11761
4.50	0.54	23522

Comment:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=77827255&hash=1DC8E684EBA90B369411BEA9A491E7D2E453F1F2

Node: STORAGE ON SITE 15

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 2.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	0.16	6970
3.00	0.33	14375
3.50	0.51	22216
4.00	0.71	30928
4.50	0.93	40511
5.00	1.16	50530
5.50	1.41	61420
6.00	1.67	72745
6.50	1.72	74923
7.00	1.72	74923

Comment: STORAGE IS USED BY MULTIPLE BASINS IN THE AREA

Node: STORAGE ON SITE 17

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.00	2.52	109858
4.50	5.04	219717

Comment: USING PERMIT FROM BROWARD THAT IS FOR MUCH LARGER AREA AND ASSUMING THAT STAGE STORAGE IS 1/5 OF THAT NUMBER FOR A ROUGH ESTIMATE
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=37159263&hash=D3675B834D18CCEC4310DCD6F0656AEC0FCED9C3

Node: STORAGE ON SITE 18

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.50	0.00	0
5.00	3.61	157252
5.50	7.54	328442
6.00	11.79	513572
6.50	16.36	712642
7.00	21.77	948301
7.50	28.52	1242331
8.00	36.61	1594732
8.50	46.04	2005502
9.00	57.37	2499037
9.50	70.64	3077078
10.00	85.34	3717410
10.50	101.47	4420033
11.00	119.03	5184947
11.50	138.02	6012151

Comment: NEEDS MORE INFORMATION

Node: STORAGE ON SITE 2

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.50	0.00	0
3.50	0.02	871
4.50	0.04	1742

Comment:

Node: STORAGE ON SITE 20

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
1.50	1.29	56192
2.00	2.58	112385

Comment: 25TH ST DRAINAGE IMPROVEMENTS

2.58AC-FT STORAGE

DRAINAGE CALC:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=71947644&hash=56720218B15DFE73AD2ACA8E756638FCF0B8E06F

PLANS:
K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Receivables\20240222 25th St Bid Plans

Node: STORAGE ON SITE 21

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 1.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
1.00	0.00	0
2.67	0.90	39204
4.33	1.80	78408

Comment: John P Lyons Phase 2:
Will be constructed after EPA clean up.

No drainage report given but from plan set have calculated exfil volume of 1.80 Ac-Ft

Node: STORAGE ON SITE 3

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 0.00 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
5.00	0.00	0
5.50	0.00	0
6.00	8.92	388555
6.50	18.58	809345
7.00	28.99	1262804
7.50	40.15	1748934
8.00	52.05	2267298
8.50	64.70	2818332
9.00	77.72	3385483
9.50	90.74	3952634
10.00	103.75	4519350

Comment:

Node: STORAGE ON SITE 4

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
2.00	0.00	0
2.50	7.00	304920
3.00	14.00	609840
3.50	21.00	914760
4.00	28.00	1219680

Stage [ft]	Volume [ac-ft]	Volume [ft3]
4.50	35.00	1524600
5.00	42.00	1829520
5.50	49.00	2134440
6.00	56.00	2439360
6.50	63.00	2744280
7.00	70.00	3049200
7.50	78.31	3411184
8.00	90.57	3945229
8.50	108.08	4707965
9.00	130.85	5699826
9.50	158.87	6920377
10.00	191.51	8342176

Comment:

Node: STORAGE ON SITE 5

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.16	6970
4.00	0.32	13939
4.50	0.48	20909
5.00	0.64	27878
5.50	0.79	34412
6.00	0.95	41382
6.50	1.11	48352
7.00	1.22	53143
7.50	1.49	64904
8.00	1.86	81022
8.50	2.33	101495
9.00	2.89	125888
9.50	3.56	155074
10.00	4.32	188179
10.50	5.37	233917
11.00	6.88	299693
11.50	8.86	385942
12.00	11.19	487436

Comment:

Node: STORAGE ON SITE 6

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.00	0
4.63	0.36	15464
5.75	0.71	30928

Comment:
https://dpep.broward.org/Enviros/download.aspx?PosseObjectId=72592592&hash=BAF6E372B1EA46D84A6355CC91B4A7800C3A1DDA

Node: STORAGE ON SITE 8

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
6.00	0.27	11761
7.00	0.53	23087
8.00	0.66	28750

Comment:

Node: STORAGE ON SITE 9

Scenario: Proposed
Type: Stage/Volume
Base Flow: 0.00 cfs
Initial Stage: 3.50 ft
Warning Stage: 0.00 ft

Stage [ft]	Volume [ac-ft]	Volume [ft3]
3.50	0.01	436
3.75	0.02	871
4.00	0.03	1307
4.25	0.06	2614
4.50	0.07	3049
4.75	0.10	4356
5.00	0.13	5663

Stage [ft]	Volume [ac-ft]	Volume [ft3]
5.25	0.16	6970
5.50	0.20	8712
5.75	0.24	10454
6.00	0.28	12197
6.25	0.33	14375
6.50	0.38	16553
6.75	0.44	19166
7.00	0.50	21780
7.25	0.59	25700
7.50	0.72	31363
7.75	0.90	39204
8.00	1.13	49223
8.25	1.40	60984
8.50	1.73	75359
8.75	2.12	92347
9.00	2.63	114563
9.25	3.23	140699
9.50	3.94	171626
9.75	4.75	206910
10.00	5.66	246550

Comment: RECREATION GREEN AREA USED AS A STORAGE SITE

Weir Link: L-0010W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0020W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-12	Op Table:	
Link Count:	1	Ref Node:	

Flow Direction:	Both		
Damping:	0.0000 ft	Top Clip	
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-0.29 ft	Ref Node:	
Control Elevation:	-0.29 ft	Discharge Coefficients	
Cross Section:	1	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0030W

Scenario:	Existing	Bottom Clip	
From Node:	B-12	Default:	0.00 ft
To Node:	B-11	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0040W

Scenario:	Existing	Bottom Clip	
From Node:	B-2	Default:	0.00 ft
To Node:	B-12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.44 ft	Discharge Coefficients	
Control Elevation:	3.44 ft	Weir Default:	2.800
Cross Section:	3	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0050W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0060W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0070W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-10	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.44 ft	**Discharge Coefficients**	
Control Elevation:	3.44 ft	Weir Default:	2.800
Cross Section:	3	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0080W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-10	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	**Discharge Coefficients**	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0090W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0100W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-13	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.76 ft	Ref Node:	
Control Elevation:	6.76 ft	Discharge Coefficients	
Cross Section:	4	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0110W

Scenario:	Existing	Bottom Clip	
From Node:	B-14	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0120W

Scenario:	Existing	Bottom Clip	
From Node:	B-15	Default:	0.00 ft
To Node:	B-14	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0130W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	6	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0140W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-14	Default:	0.00 ft
To Node:	B-17	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0150W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	**Discharge Coefficients**	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0160W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	**Discharge Coefficients**	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0170W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	**Discharge Coefficients**	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0180W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	8.19 ft	Ref Node:	
Control Elevation:	8.19 ft	Discharge Coefficients	
Cross Section:	15	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0190W

Scenario:	Existing	Bottom Clip	
From Node:	B-16	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	Discharge Coefficients	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0200W

Scenario:	Existing	Bottom Clip	
From Node:	B-9	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.97 ft	Discharge Coefficients	
Control Elevation:	4.97 ft	Weir Default:	2.800
Cross Section:	12	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0210W

Scenario:	Existing	Bottom Clip	
From Node:	B-8	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0220W

Scenario:	Existing	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0230W

Scenario:	Existing	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-8	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0240W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.47 ft	**Discharge Coefficients**	
Control Elevation:	4.47 ft	Weir Default:	2.800
Cross Section:	10	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0250W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	**Discharge Coefficients**	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0260W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	8.19 ft	Ref Node:	
Control Elevation:	8.19 ft	Discharge Coefficients	
Cross Section:	15	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0270W

Scenario:	Existing	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.27 ft	Discharge Coefficients	
Control Elevation:	3.27 ft	Weir Default:	2.800
Cross Section:	16	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0280W

Scenario:	Existing	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.17 ft	Discharge Coefficients	
Control Elevation:	6.17 ft	Weir Default:	2.800
Cross Section:	24	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0290W

Scenario:	Existing	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.34 ft	Discharge Coefficients	
Control Elevation:	3.34 ft	Weir Default:	2.800
Cross Section:	14	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0300W

Scenario:	Existing	Bottom Clip	
From Node:	B-3	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0310W

Scenario:	Existing	Bottom Clip	
From Node:	B-4	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0320W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	**Discharge Coefficients**	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0330W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-3	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	**Discharge Coefficients**	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0340W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-2	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	4.40 ft	Ref Node:	
Control Elevation:	4.40 ft	Discharge Coefficients	
Cross Section:	2	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0350W

Scenario:	Existing	Bottom Clip	
From Node:	B-1	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0360W

Scenario:	Existing	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0370W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0380W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-14	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0390W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-10	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	**Discharge Coefficients**	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0400W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-13	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	**Discharge Coefficients**	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0410W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-21	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	**Discharge Coefficients**	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0420W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-21	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.04 ft	Ref Node:	
Control Elevation:	7.04 ft	Discharge Coefficients	
Cross Section:	20	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0430W

Scenario:	Existing	Bottom Clip	
From Node:	B-6	Default:	0.00 ft
To Node:	B-18	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.43 ft	Discharge Coefficients	
Control Elevation:	3.43 ft	Weir Default:	2.800
Cross Section:	17	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0440W

Scenario:	Existing	Bottom Clip	
From Node:	B-18	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	Discharge Coefficients	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0450W

Scenario:	Existing	Bottom Clip	
From Node:	B-18	Default:	0.00 ft
To Node:	B-20	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	Discharge Coefficients	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0460W

Scenario:	Existing	Bottom Clip	
From Node:	B-21	Default:	0.00 ft
To Node:	B-23	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	Discharge Coefficients	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0470W

Scenario:	Existing	Bottom Clip	
From Node:	B-23	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	Discharge Coefficients	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0480W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-23	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	**Discharge Coefficients**	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0490W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-33	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	**Discharge Coefficients**	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0500W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.07 ft	Ref Node:	
Control Elevation:	6.07 ft	Discharge Coefficients	
Cross Section:	23	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0510W

Scenario:	Existing	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	Discharge Coefficients	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0520W

Scenario:	Existing	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-35	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.17 ft	Discharge Coefficients	
Control Elevation:	7.17 ft	Weir Default:	2.800
Cross Section:	25	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0530W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.17 ft	**Discharge Coefficients**	
Control Elevation:	6.17 ft	Weir Default:	2.800
Cross Section:	24	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0540W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.70 ft	**Discharge Coefficients**	
Control Elevation:	7.70 ft	Weir Default:	2.800
Cross Section:	29	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0550W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	**Discharge Coefficients**	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600

Orifice Table:

Comment:

Weir Link: L-0560W

Scenario:	Existing	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	Discharge Coefficients	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0570W

Scenario:	Existing	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0580W

Scenario:	Existing	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.17 ft	Ref Node:	
Control Elevation:	7.17 ft	Discharge Coefficients	
Cross Section:	25	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0590W

Scenario:	Existing	Bottom Clip	
From Node:	B-34	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0610W

Scenario:	Existing	Bottom Clip	
From Node:	B-36	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.64 ft	Discharge Coefficients	
Control Elevation:	6.64 ft	Weir Default:	2.800
Cross Section:	28	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0620W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-36	Default:	0.00 ft
To Node:	B-38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	**Discharge Coefficients**	
Control Elevation:	6.99 ft	Weir Default:	2.800
Cross Section:	27	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0640W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-38	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.64 ft	**Discharge Coefficients**	
Control Elevation:	6.64 ft	Weir Default:	2.800
Cross Section:	28	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0650W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-29	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	**Discharge Coefficients**	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0660W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-28	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	**Discharge Coefficients**	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0670W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-27	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	**Discharge Coefficients**	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0680W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-27	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.39 ft	Ref Node:	
Control Elevation:	6.39 ft	Discharge Coefficients	
Cross Section:	30	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0690W

Scenario:	Existing	Bottom Clip	
From Node:	B-30	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	Discharge Coefficients	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0700W

Scenario:	Existing	Bottom Clip	
From Node:	B-26	Default:	0.00 ft
To Node:	B-27	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.55 ft	Discharge Coefficients	
Control Elevation:	5.55 ft	Weir Default:	2.800
Cross Section:	34	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0710W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-27	Default:	0.00 ft
To Node:	B-28	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.59 ft	**Discharge Coefficients**	
Control Elevation:	4.59 ft	Weir Default:	2.800
Cross Section:	32	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0720W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-28	Default:	0.00 ft
To Node:	B-29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.64 ft	**Discharge Coefficients**	
Control Elevation:	5.64 ft	Weir Default:	2.800
Cross Section:	31	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0730W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-26	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.43 ft	**Discharge Coefficients**	
Control Elevation:	5.43 ft	Weir Default:	2.800
Cross Section:	35	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0740W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-24	Default:	0.00 ft
To Node:	B-40	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.67 ft	**Discharge Coefficients**	
Control Elevation:	5.67 ft	Weir Default:	2.800
Cross Section:	38	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0750W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-40	Default:	0.00 ft
To Node:	B-25	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.92 ft	**Discharge Coefficients**	
Control Elevation:	5.92 ft	Weir Default:	2.800
Cross Section:	37	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0760W

Scenario:	Existing	**Bottom Clip**	
From Node:	B-24	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.14 ft	Ref Node:	
Control Elevation:	6.14 ft	Discharge Coefficients	
Cross Section:	36	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0770W

Scenario:	Existing	Bottom Clip	
From Node:	B-40	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	Discharge Coefficients	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0780W

Scenario:	Existing	Bottom Clip	
From Node:	B-25	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	Discharge Coefficients	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0790W			
Scenario:	Existing	Bottom Clip	
From Node:	B-20	Default:	0.00 ft
To Node:	B-21	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.34 ft	Discharge Coefficients	
Control Elevation:	-0.34 ft	Weir Default:	2.800
Cross Section:	19	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0820W			
Scenario:	Existing	Bottom Clip	
From Node:	B-1	Default:	0.00 ft
To Node:	STORAGE ON SITE 2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-0830P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.72 ft	Invert:	-8.91 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-12	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1462.61 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	

Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: Outfall leading from Basin 1 to Basin 12. Unknown pipe material so assuming CMP. Other drainage infrastructure modeled with stage storage nodes as it is held mostly on site (sourced from drainage reports)

Pipe Link: L-0840P		Upstream		Downstream	
Scenario:	Existing	Invert:	8.18 ft	Invert:	8.44 ft
From Node:	B-1	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2870.39 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (1 of 2 outfalls)

Pipe Link: L-0850P		Upstream		Downstream	
Scenario:	Existing	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2648.59 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (2 of 2 outfalls) assuming bituminous coated pipe like other latteral on property

Weir Link: L-0860W		
Scenario:	Existing	Bottom Clip

From Node:	B-3
To Node:	STORAGE ON SITE 3
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Irregular
Invert:	-1.33 ft
Control Elevation:	-1.33 ft
Cross Section:	11

Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Pipe Link: L-0880P		Upstream		Downstream	
Scenario:	Existing	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-7	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-3	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1537.48 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf
Unknown material assuming HDPE due to being connected to a pump station

Rating Curve Link: L-0890RC

Scenario:	Existing
From Node:	B-3
To Node:	B-11
Link Count:	1
Flow Direction:	Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	1.50	B-3	0.50	B-3

Comment: 3 CFS PUMP FOUND K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf PAGE 107

Pipe Link: L-0910P		Upstream		Downstream	
Scenario:	Existing	Invert:	-1.11 ft	Invert:	-3.22 ft
From Node:	B-9	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-15	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	715.54 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0930P		Upstream		Downstream	
Scenario:	Existing	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-9	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	872.92 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0940P		Upstream		Downstream	
Scenario:	Existing	Invert:	-1.90 ft	Invert:	-2.22 ft
From Node:	B-15	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-17	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	910.18 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	

Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00		Top Clip		
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0990P		Upstream		Downstream	
Scenario:	Existing	Invert:	0.43 ft	Invert:	0.12 ft
From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	None		Bottom Clip		
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2490.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00		Top Clip		
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1020P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.60 ft	Invert:	1.60 ft
From Node:	B-39	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-6	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both		Bottom Clip		
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	7099.35 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00		Top Clip		
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: pembroke park road feeding into DOT system assuming same material as previous pipes in system (Bitumous Coated Pipe)

Pipe Link: L-1060P		Upstream		Downstream	
Scenario:	Existing	Invert:	7.40 ft	Invert:	6.40 ft
From Node:	B-4	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-5	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.90 ft	Max Depth:	0.90 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2152.81 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: LOCAL SYSTEM FEEDS INTO BASIN 5 AND THEN SITS IN A RETENTION AREA BEFORE GOING INTO THE DOT SYSTEM PAST A CONTROL STRUCTURE

Pipe Link: L-1080P		Upstream		Downstream	
Scenario:	Existing	Invert:	-1.33 ft	Invert:	-1.33 ft
From Node:	B-9	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-3	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	12473.45 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1120P		Upstream		Downstream	
Scenario:	Existing	Invert:	8.18 ft	Invert:	2.90 ft
From Node:	B-10	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-11	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	7.42 ft	Max Depth:	7.42 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1956.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000

Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: TWO OUTLETS LEADING INTO LAKE COMBINED INTO ONE PIPE (BOTH PVC ONE 77" THE SECOND 12")

Weir Link: L-1130W

Scenario:	Existing	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	STORAGE ON SITE 5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1140P		Upstream		Downstream	
Scenario:	Existing	Invert:	1.25 ft	Invert:	-1.70 ft
From Node:	B-15	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-14	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	798.60 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1150P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.17 ft	Invert:	-4.15 ft

From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	19	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	1576.14 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: PIPE CONNECTING BASINS B-17 B-16 B-6 AND B-3 MOVING FROM SW 31ST AVE CAROLINA ST AND S PARK ROAD INTO LARGE LAKE WITH PUMP STATION

Pipe Link: L-1200P		Upstream		Downstream	
Scenario:	Existing	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-6	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1953.70 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING HDPE

Weir Link: L-1210W			
Scenario:	Existing	Bottom Clip	
From Node:	B-18	Default:	0.00 ft
To Node:	STORAGE ON SITE 6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	Discharge Coefficients	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Pipe Link: L-1250P		Upstream		Downstream	
Scenario:	Existing	Invert:	0.01 ft	Invert:	-1.11 ft
From Node:	B-33	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-32	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	692.87 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING PIPE MATERIAL AND SIZE IS 1" AND HDPE

Pipe Link: L-1260P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.49 ft	Invert:	2.47 ft
From Node:	B-32	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1629.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1270W			
Scenario:	Existing	Bottom Clip	
From Node:	B-32	Default:	0.00 ft

To Node:	STORAGE ON SITE 9		
Link Count:	1	Op Table:	
Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.99 ft	Ref Node:	
Control Elevation:	6.99 ft	Discharge Coefficients	
Cross Section:	27	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-1290W

Scenario:	Existing	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	STORAGE ON SITE 11	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-1300W

Scenario:	Existing	Bottom Clip	
From Node:	B-36	Default:	0.00 ft
To Node:	STORAGE ON SITE 12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1310P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-35	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-36	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1532.73 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1320P		Upstream		Downstream	
Scenario:	Existing	Invert:	4.79 ft	Invert:	4.69 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-38	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1068.86 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1330W			
Scenario:	Existing	Bottom Clip	
From Node:	B-38	Default:	0.00 ft
To Node:	STORAGE ON SITE 13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	Discharge Coefficients	
Control Elevation:	6.99 ft	Weir Default:	2.800

Cross Section: 27

Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Pipe Link: L-1340P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.10 ft	Invert:	7.05 ft
From Node:	B-38	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2528.34 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1400P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-31	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	936.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1410P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.40 ft	Invert:	-1.30 ft

From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	396.60 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1420P		Upstream		Downstream	
Scenario:	Existing	Invert:	0.54 ft	Invert:	-0.40 ft
From Node:	B-29	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-28	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	283.66 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING 1" CMP

Pipe Link: L-1430P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.40 ft	Invert:	-0.70 ft
From Node:	B-28	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-27	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	261.31 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	

Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1440P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.13 ft	Invert:	-1.00 ft
From Node:	B-27	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	696.58 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1450P		Upstream		Downstream	
Scenario:	Existing	Invert:	0.90 ft	Invert:	-0.84 ft
From Node:	B-30	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-26	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	374.43 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1500P		Upstream		Downstream	
Scenario:	Existing	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-40	Geometry:	Circular	Geometry:	Circular

Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	821.13 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1510P		Upstream		Downstream	
Scenario:	Existing	Invert:	1.26 ft	Invert:	-0.98 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	937.41 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: POTENTIAL DISCHARGE INTO LAKE AREA. WILL NEED FURTHER RESEARCH

Drop Structure Link: L-1580DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	297.21 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000

Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: assumed invert and control elevation as catch basin data was not available. assumption based on raster elevations for general area

Drop Structure Comment: drop structure used to model the flow of water into a drainage structure and into the local drainage system. the following stage volume node represents the designed storage for the site from previous reports for permits.

Drop Structure Link: L-1590DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE 2	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	288.51 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1

Bottom Clip

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1600DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-2	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	18	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	262.15 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Max Width:	10.00 ft		
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1610DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-3	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	3	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	767.89 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.40 ft	Op Table:	
Control Elevation:	5.40 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1620DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	4	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	371.12 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.08 ft	Ref Node:	
Control Elevation:	4.08 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1630DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-18	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	6	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	

Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	254.22 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.40 ft	Op Table:	
Control Elevation:	7.40 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1640DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-13	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	5	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	277.27 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.00 ft	Ref Node:	
Control Elevation:	5.00 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1650DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-22	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	8	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	445.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular		

Invert:	7.40 ft
Control Elevation:	7.40 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1660DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	889.88 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	5.48 ft
Control Elevation:	5.48 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1670DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-40	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	308.92 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.48 ft	Op Table:	
Control Elevation:	5.48 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1680DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-30	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	

	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	239.04 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.10 ft	Op Table:	
Control Elevation:	5.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1690DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	622.33 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	

Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.10 ft	Ref Node:	
Control Elevation:	5.10 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1700DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 15	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	984.42 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip
Weir:	1	

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.01 ft
Control Elevation:	7.01 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1710DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.49 ft	Invert:	2.47 ft
From Node:	B-32	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	9	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	261.51 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.49 ft
Control Elevation:	7.49 ft
Max Depth:	999.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Max Width:	10.00 ft		
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1720DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.10 ft	Invert:	2.01 ft
From Node:	B-37	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 14	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	441.61 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.10 ft	Op Table:	
Control Elevation:	7.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1730DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-35	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	11	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	449.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.96 ft	Ref Node:	
Control Elevation:	7.96 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1740DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.10 ft	Invert:	2.01 ft
From Node:	B-38	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	13	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	

Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	385.31 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.10 ft	Op Table:	
Control Elevation:	7.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1750DS		Upstream Pipe		Downstream Pipe	
Scenario:	Existing	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	12	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	732.41 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.96 ft	Ref Node:	
Control Elevation:	7.96 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Rating Curve Link: L-1820RC

Scenario: Existing
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: None

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP7CFS	2.00	B-3	0.50	

Comment: Has a 7cfs limit to Pembroke Road/golf course based on permitting but has two pumps inside that can pump 11cfs (not allowed to run at the same time due to permit)
- From Stefano's meeting with the town 10/25/2023

Rating Curve Link: L-1830RC

Scenario: Existing
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 80CFS	1.00	B-3	0.50	B-3

Comment: Set of 3, one out for repair (still included)
VERIFY

Rating Curve Link: L-1850RC

Scenario: Existing
From Node: B-7
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	1.00	B-7	0.50	

Comment:

Pipe Link: L-1890P		Upstream		Downstream	
Scenario:	Existing	Invert:	-2.50 ft	Invert:	-2.50 ft
From Node:	B-12	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-11	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1071.21 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1900P		Upstream		Downstream	
Scenario:	Existing	Invert:	2.50 ft	Invert:	2.50 ft
From Node:	STORAGE ON SITE 15	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	STORAGE 52ND ST	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	162.09 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-0010W

Scenario:	Future	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0020W

Scenario:	Future	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0030W

Scenario:	Future	**Bottom Clip**	
From Node:	B-12	Default:	0.00 ft
To Node:	B-11	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0040W

Scenario:	Future	**Bottom Clip**	
From Node:	B-2	Default:	0.00 ft
To Node:	B-12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.44 ft	**Discharge Coefficients**	
Control Elevation:	3.44 ft	Weir Default:	2.800
Cross Section:	3	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0050W

Scenario:	Future	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0060W

Scenario:	Future	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-0.29 ft	Ref Node:	
Control Elevation:	-0.29 ft	Discharge Coefficients	
Cross Section:	1	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0070W

Scenario:	Future	Bottom Clip	
From Node:	B-10	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.44 ft	Discharge Coefficients	
Control Elevation:	3.44 ft	Weir Default:	2.800
Cross Section:	3	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0080W

Scenario:	Future	Bottom Clip	
From Node:	B-10	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0090W

Scenario:	Future	Bottom Clip	
From Node:	B-11	Default:	0.00 ft
To Node:	B-13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0100W

Scenario:	Future	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0110W

Scenario:	Future	Bottom Clip	
From Node:	B-14	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0120W

Scenario:	Future	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-14	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0130W

Scenario:	Future	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	6	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0140W

Scenario:	Future	**Bottom Clip**	
From Node:	B-14	Default:	0.00 ft
To Node:	B-17	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.43 ft	Ref Node:	
Control Elevation:	7.43 ft	Discharge Coefficients	
Cross Section:	7	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0150W

Scenario:	Future	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	Discharge Coefficients	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0160W

Scenario:	Future	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	Discharge Coefficients	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0170W

Scenario:	Future	Bottom Clip	
From Node:	B-15	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	Discharge Coefficients	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0180W

Scenario:	Future	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	8.19 ft	Discharge Coefficients	
Control Elevation:	8.19 ft	Weir Default:	2.800
Cross Section:	15	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0190W

Scenario:	Future	Bottom Clip	
From Node:	B-16	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	Discharge Coefficients	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0200W

Scenario:	Future	**Bottom Clip**	
From Node:	B-9	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.97 ft	**Discharge Coefficients**	
Control Elevation:	4.97 ft	Weir Default:	2.800
Cross Section:	12	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0210W

Scenario:	Future	**Bottom Clip**	
From Node:	B-8	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	**Discharge Coefficients**	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0220W

Scenario:	Future	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-1.33 ft	Ref Node:	
Control Elevation:	-1.33 ft	Discharge Coefficients	
Cross Section:	11	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0230W

Scenario:	Future	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-8	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0240W

Scenario:	Future	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.47 ft	Discharge Coefficients	
Control Elevation:	4.47 ft	Weir Default:	2.800
Cross Section:	10	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0250W

Scenario:	Future	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	Discharge Coefficients	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0260W

Scenario:	Future	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	8.19 ft	Discharge Coefficients	
Control Elevation:	8.19 ft	Weir Default:	2.800
Cross Section:	15	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0270W

Scenario:	Future	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.27 ft	Discharge Coefficients	
Control Elevation:	3.27 ft	Weir Default:	2.800
Cross Section:	16	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0280W

Scenario:	Future	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.17 ft	**Discharge Coefficients**	
Control Elevation:	6.17 ft	Weir Default:	2.800
Cross Section:	24	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0290W

Scenario:	Future	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.34 ft	**Discharge Coefficients**	
Control Elevation:	3.34 ft	Weir Default:	2.800
Cross Section:	14	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0300W

Scenario:	Future	**Bottom Clip**	
From Node:	B-3	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	5.04 ft	Ref Node:	
Control Elevation:	5.04 ft	Discharge Coefficients	
Cross Section:	13	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0310W

Scenario:	Future	Bottom Clip	
From Node:	B-4	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0320W

Scenario:	Future	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	Discharge Coefficients	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0330W

Scenario:	Future	**Bottom Clip**	
From Node:	B-3	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	**Discharge Coefficients**	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0340W

Scenario:	Future	**Bottom Clip**	
From Node:	B-2	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	**Discharge Coefficients**	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0350W

Scenario:	Future	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0360W

Scenario:	Future	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0370W

Scenario:	Future	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0380W

Scenario:	Future	**Bottom Clip**	
From Node:	B-14	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.43 ft	Ref Node:	
Control Elevation:	7.43 ft	Discharge Coefficients	
Cross Section:	7	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0390W

Scenario:	Future	Bottom Clip	
From Node:	B-10	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	Discharge Coefficients	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0400W

Scenario:	Future	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	Discharge Coefficients	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0410W

Scenario:	Future	**Bottom Clip**	
From Node:	B-21	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	**Discharge Coefficients**	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0420W

Scenario:	Future	**Bottom Clip**	
From Node:	B-21	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.04 ft	**Discharge Coefficients**	
Control Elevation:	7.04 ft	Weir Default:	2.800
Cross Section:	20	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0430W

Scenario:	Future	**Bottom Clip**	
From Node:	B-6	Default:	0.00 ft
To Node:	B-18	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.43 ft	**Discharge Coefficients**	
Control Elevation:	3.43 ft	Weir Default:	2.800
Cross Section:	17	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0440W

Scenario:	Future	**Bottom Clip**	
From Node:	B-18	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	**Discharge Coefficients**	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0450W

Scenario:	Future	**Bottom Clip**	
From Node:	B-18	Default:	0.00 ft
To Node:	B-20	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	**Discharge Coefficients**	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0460W

Scenario:	Future	**Bottom Clip**	
From Node:	B-21	Default:	0.00 ft
To Node:	B-23	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.96 ft	Ref Node:	
Control Elevation:	6.96 ft	Discharge Coefficients	
Cross Section:	21	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0470W

Scenario:	Future	Bottom Clip	
From Node:	B-23	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	Discharge Coefficients	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0480W

Scenario:	Future	Bottom Clip	
From Node:	B-23	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	Discharge Coefficients	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0490W

Scenario:	Future	**Bottom Clip**	
From Node:	B-33	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	**Discharge Coefficients**	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0500W

Scenario:	Future	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.07 ft	**Discharge Coefficients**	
Control Elevation:	6.07 ft	Weir Default:	2.800
Cross Section:	23	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0510W

Scenario:	Future	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	**Discharge Coefficients**	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0520W

Scenario:	Future	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-35	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.17 ft	**Discharge Coefficients**	
Control Elevation:	7.17 ft	Weir Default:	2.800
Cross Section:	25	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0530W

Scenario:	Future	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.17 ft	**Discharge Coefficients**	
Control Elevation:	6.17 ft	Weir Default:	2.800
Cross Section:	24	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0540W

Scenario:	Future	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.70 ft	Ref Node:	
Control Elevation:	7.70 ft	Discharge Coefficients	
Cross Section:	29	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0550W

Scenario:	Future	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0560W

Scenario:	Future	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	Discharge Coefficients	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0570W

Scenario:	Future	**Bottom Clip**	
From Node:	B-35	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	**Discharge Coefficients**	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0580W

Scenario:	Future	**Bottom Clip**	
From Node:	B-35	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.17 ft	**Discharge Coefficients**	
Control Elevation:	7.17 ft	Weir Default:	2.800
Cross Section:	25	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0590W

Scenario:	Future	**Bottom Clip**	
From Node:	B-34	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	**Discharge Coefficients**	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0610W

Scenario:	Future	**Bottom Clip**	
From Node:	B-36	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.64 ft	**Discharge Coefficients**	
Control Elevation:	6.64 ft	Weir Default:	2.800
Cross Section:	28	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0620W

Scenario:	Future	**Bottom Clip**	
From Node:	B-36	Default:	0.00 ft
To Node:	B-38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	**Discharge Coefficients**	
Control Elevation:	6.99 ft	Weir Default:	2.800
Cross Section:	27	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0640W

Scenario:	Future	**Bottom Clip**	
From Node:	B-38	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.64 ft	Ref Node:	
Control Elevation:	6.64 ft	Discharge Coefficients	
Cross Section:	28	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0650W

Scenario:	Future	Bottom Clip	
From Node:	B-29	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0660W

Scenario:	Future	Bottom Clip	
From Node:	B-28	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0670W

Scenario:	Future	Bottom Clip	
From Node:	B-27	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0680W

Scenario:	Future	Bottom Clip	
From Node:	B-27	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0690W

Scenario:	Future	Bottom Clip	
From Node:	B-30	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	Discharge Coefficients	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0700W

Scenario:	Future	**Bottom Clip**	
From Node:	B-26	Default:	0.00 ft
To Node:	B-27	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.55 ft	**Discharge Coefficients**	
Control Elevation:	5.55 ft	Weir Default:	2.800
Cross Section:	34	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0710W

Scenario:	Future	**Bottom Clip**	
From Node:	B-27	Default:	0.00 ft
To Node:	B-28	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.59 ft	**Discharge Coefficients**	
Control Elevation:	4.59 ft	Weir Default:	2.800
Cross Section:	32	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0720W

Scenario:	Future	**Bottom Clip**	
From Node:	B-28	Default:	0.00 ft
To Node:	B-29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	5.64 ft	Ref Node:	
Control Elevation:	5.64 ft	Discharge Coefficients	
Cross Section:	31	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0730W

Scenario:	Future	Bottom Clip	
From Node:	B-26	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.43 ft	Discharge Coefficients	
Control Elevation:	5.43 ft	Weir Default:	2.800
Cross Section:	35	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0740W

Scenario:	Future	Bottom Clip	
From Node:	B-24	Default:	0.00 ft
To Node:	B-40	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.67 ft	Discharge Coefficients	
Control Elevation:	5.67 ft	Weir Default:	2.800
Cross Section:	38	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0750W

Scenario:	Future	Bottom Clip	
From Node:	B-40	Default:	0.00 ft
To Node:	B-25	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.92 ft	Discharge Coefficients	
Control Elevation:	5.92 ft	Weir Default:	2.800
Cross Section:	37	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0760W

Scenario:	Future	Bottom Clip	
From Node:	B-24	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	Discharge Coefficients	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0770W

Scenario:	Future	Bottom Clip	
From Node:	B-40	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	Discharge Coefficients	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0780W

Scenario:	Future	**Bottom Clip**	
From Node:	B-25	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	**Discharge Coefficients**	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0790W

Scenario:	Future	**Bottom Clip**	
From Node:	B-20	Default:	0.00 ft
To Node:	B-21	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.34 ft	**Discharge Coefficients**	
Control Elevation:	-0.34 ft	Weir Default:	2.800
Cross Section:	19	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0820W

Scenario:	Future	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	STORAGE ON SITE 2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-0.29 ft	Ref Node:	
Control Elevation:	-0.29 ft	Discharge Coefficients	
Cross Section:	1	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-0830P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.72 ft	Invert:	-8.91 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-12	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1462.61 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: Outfall leading from Basin 1 to Basin 12. Unknown pipe material so assuming CMP. Other drainage infrastructure modeled with stage storage nodes as it is held mostly on site (sourced from drainage reports)

Pipe Link: L-0840P		Upstream		Downstream	
Scenario:	Future	Invert:	8.18 ft	Invert:	8.44 ft
From Node:	B-1	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2870.39 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (1 of 2 outfalls)

Pipe Link: L-0850P		Upstream		Downstream	
Scenario:	Future	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2648.59 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (2 of 2 outfalls) assuming bituminous coated pipe like other latteral on property

Weir Link: L-0860W			
Scenario:	Future	Bottom Clip	
From Node:	B-3	Default:	0.00 ft
To Node:	STORAGE ON SITE 3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-0880P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-7	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-3	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1537.48 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			

Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf
Unknown material assuming HDPE due to being connected to a pump station

Rating Curve Link: L-0890RC

Scenario:	Future
From Node:	B-3
To Node:	B-11
Link Count:	1
Flow Direction:	Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	1.50	B-3	0.50	B-3

Comment: 3 CFS PUMP FOUND K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf PAGE 107

Pipe Link: L-0910P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.11 ft	Invert:	-3.22 ft
From Node:	B-9	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE 20	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	715.54 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0930P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-9	Geometry: Circular		Geometry: Circular	

Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	872.92 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0940P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.90 ft	Invert:	-2.22 ft
From Node:	B-15	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-17	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	910.18 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0990P		Upstream		Downstream	
Scenario:	Future	Invert:	0.43 ft	Invert:	0.12 ft
From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	None	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2490.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	

Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1020P		Upstream		Downstream	
Scenario:	Future	Invert:	2.60 ft	Invert:	1.60 ft
From Node:	B-39	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-6	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	7099.35 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: pembroke park road feeding into DOT system assuming same material as previous pipes in system (Bitumous Coated Pipe)

Pipe Link: L-1060P		Upstream		Downstream	
Scenario:	Future	Invert:	7.40 ft	Invert:	6.40 ft
From Node:	B-4	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-5	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.90 ft	Max Depth:	0.90 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2152.81 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: LOCAL SYSTEM FEEDS INTO BASIN 5 AND THEN SITS IN A RETENTION AREA BEFORE GOING INTO THE DOT SYSTEM PAST A CONTROL STRUCTURE

Pipe Link: L-1080P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.33 ft	Invert:	-1.33 ft

From Node:	B-9	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-3	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	300.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1120P		Upstream		Downstream	
Scenario:	Future	Invert:	8.18 ft	Invert:	2.90 ft
From Node:	B-10	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-11	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	7.42 ft	Max Depth:	7.42 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1956.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: TWO OUTLETS LEADING INTO LAKE COMBINED INTO ONE PIPE (BOTH PVC ONE 77" THE SECOND 12")

Weir Link: L-1130W			
Scenario:	Future	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	STORAGE ON SITE 5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600

Orifice Table:

Comment:

Pipe Link: L-1140P		Upstream		Downstream	
Scenario:	Future	Invert:	1.25 ft	Invert:	-1.70 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0100	Manning's N:	0.0100
		Geometry: Circular		Geometry: Circular	
To Node:	B-14	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	798.60 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1150P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.17 ft	Invert:	-4.15 ft
From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 19	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	1576.14 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: PIPE CONNECTING BASINS B-17 B-16 B-6 AND B-3 MOVING FROM SW 31ST AVE CAROLINA ST AND S PARK ROAD INTO LARGE LAKE WITH PUMP STATION

Pipe Link: L-1200P		Upstream		Downstream	
Scenario:	Future	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-6	Manning's N:	0.0100	Manning's N:	0.0100

To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1953.70 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING HDPE

Weir Link: L-1210W			
Scenario:	Future	Bottom Clip	
From Node:	B-18	Default:	0.00 ft
To Node:	STORAGE ON SITE 6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	Discharge Coefficients	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1250P		Upstream		Downstream	
Scenario:	Future	Invert:	0.01 ft	Invert:	-1.11 ft
From Node:	B-33	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-32	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	692.87 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING PIPE MATERIAL AND SIZE IS 1" AND HDPE

Pipe Link: L-1260P		Upstream		Downstream	
Scenario:	Future	Invert:	2.49 ft	Invert:	2.47 ft
From Node:	B-32	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1629.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1270W			
Scenario:	Future	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	STORAGE ON SITE 9	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	Discharge Coefficients	
Control Elevation:	6.99 ft	Weir Default:	2.800
Cross Section:	27	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-1290W			
Scenario:	Future	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	STORAGE ON SITE 11	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft

Weir Type:	Horizontal
Geometry Type:	Irregular
Invert:	7.93 ft
Control Elevation:	7.93 ft
Cross Section:	26

Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Weir Link: L-1300W

Scenario:	Future
From Node:	B-36
To Node:	STORAGE ON SITE 12
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Irregular
Invert:	7.93 ft
Control Elevation:	7.93 ft
Cross Section:	26

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Pipe Link: L-1310P

Scenario:	Future
From Node:	B-35
To Node:	B-36
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Length:	1532.73 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream		Downstream	
Invert:	2.96 ft	Invert:	2.87 ft
Manning's N:	0.0100	Manning's N:	0.0100
Geometry: Circular		Geometry: Circular	
Max Depth:	1.00 ft	Max Depth:	1.00 ft
Bottom Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000
Top Clip			
Default:	0.00 ft	Default:	0.00 ft
Op Table:		Op Table:	
Ref Node:		Ref Node:	
Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1320P		Upstream		Downstream	
Scenario:	Future	Invert:	4.79 ft	Invert:	4.69 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-38	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1068.86 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1330W			
Scenario:	Future	Bottom Clip	
From Node:	B-38	Default:	0.00 ft
To Node:	STORAGE ON SITE 13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	Discharge Coefficients	
Control Elevation:	6.99 ft	Weir Default:	2.800
Cross Section:	27	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1340P		Upstream		Downstream	
Scenario:	Future	Invert:	2.10 ft	Invert:	7.05 ft
From Node:	B-38	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2528.34 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft

Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1400P		Upstream		Downstream	
Scenario:	Future	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-31	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	936.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1410P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	396.60 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1420P		Upstream		Downstream	
Scenario:	Future	Invert:	0.54 ft	Invert:	-0.40 ft
From Node:	B-29	Manning's N:	0.0240	Manning's N:	0.0240

To Node:	B-28	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	283.66 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING 1" CMP

Pipe Link: L-1430P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.40 ft	Invert:	-0.70 ft
From Node:	B-28	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-27	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	261.31 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1440P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.13 ft	Invert:	-1.00 ft
From Node:	B-27	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	696.58 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	

		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1450P		Upstream		Downstream	
Scenario:	Future	Invert:	0.90 ft	Invert:	-0.84 ft
From Node:	B-30	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	374.43 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1500P		Upstream		Downstream	
Scenario:	Future	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-40	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	821.13 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1510P		Upstream		Downstream	
Scenario:	Future	Invert:	1.26 ft	Invert:	-0.98 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft

Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	937.41 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: POTENTIAL DISCHARGE INTO LAKE AREA. WILL NEED FURTHER RESEARCH

Drop Structure Link: L-1580DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	297.21 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	8.78 ft	Op Table:	
Control Elevation:	8.78 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment: assumed invert and control elevation as catch basin data was not available. assumption based on raster

elevations for general area

Drop Structure Comment: drop structure used to model the flow of water into a drainage structure and into the local drainage system. the following stage volume node represents the designed storage for the site from previous reports for permits.

Drop Structure Link: L-1590DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE 2	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	288.51 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	8.78 ft	Ref Node:	
Control Elevation:	8.78 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1600DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	3.28 ft	Invert:	2.90 ft

From Node:	B-2	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	18	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	262.15 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	8.78 ft	Op Table:	
Control Elevation:	8.78 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1610DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-3	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	3	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			

Length:	767.89 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	5.40 ft
Control Elevation:	5.40 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1620DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	4	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	371.12 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.08 ft	Ref Node:	
Control Elevation:	4.08 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1630DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-18	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	6	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	254.22 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.40 ft	Ref Node:	
Control Elevation:	7.40 ft		

Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1640DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-13	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	5	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	277.27 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.00 ft	Ref Node:	
Control Elevation:	5.00 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1650DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-22	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	8	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	445.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.40 ft	Ref Node:	
Control Elevation:	7.40 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1660DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	

Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	889.88 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.48 ft	Op Table:	
Control Elevation:	5.48 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1670DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-40	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	308.92 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.48 ft	Ref Node:	
Control Elevation:	5.48 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1680DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-30	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	239.04 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular		

Invert:	5.10 ft		
Control Elevation:	5.10 ft	Op Table:	
Max Depth:	999.00 ft	Ref Node:	
Max Width:	10.00 ft	**Discharge Coefficients**	
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1690DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	622.33 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.10 ft	Op Table:	
Control Elevation:	5.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1700DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	15	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	984.42 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.01 ft	Op Table:	
Control Elevation:	7.01 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1710DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.49 ft	Invert:	2.47 ft
From Node:	B-32	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	

	9	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	261.51 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.49 ft	Op Table:	
Control Elevation:	7.49 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1720DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.10 ft	Invert:	2.01 ft
From Node:	B-37	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	14	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	441.61 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	

Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.10 ft	Ref Node:	
Control Elevation:	7.10 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1730DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-35	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	11	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	449.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip
Weir:	1	

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.96 ft
Control Elevation:	7.96 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1740DS

Scenario:	Future
From Node:	B-38
To Node:	STORAGE ON SITE 13
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	385.31 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe

Invert:	2.10 ft
Manning's N:	0.0100

Geometry: Circular

Max Depth:	1.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe

Invert:	2.01 ft
Manning's N:	0.0100

Geometry: Circular

Max Depth:	1.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.10 ft
Control Elevation:	7.10 ft
Max Depth:	999.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Max Width:	10.00 ft		
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1750DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 12	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	732.41 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.96 ft	Op Table:	
Control Elevation:	7.96 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Rating Curve Link: L-1820RC

Scenario: Future
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP7CFS	2.00	B-3	0.50	

Comment: Has a 7cfs limit to Pembroke Road/golf course based on permitting but has two pumps inside that can pump 11cfs (not allowed to run at the same time due to permit)
- From Stefano's meeting with the town 10/25/2023

Rating Curve Link: L-1830RC

Scenario: Future
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 80CFS	0.80	B-3	0.40	B-3

Comment: Set of 3, one out for repair (still included)
VERIFY

Rating Curve Link: L-1850RC

Scenario: Future
From Node: B-7
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	0.50	B-7	0.00	B-7

Comment:

Pipe Link: L-1870P

Scenario: Future
From Node: B-15
To Node: STORAGE ON SITE 20
Link Count: 1

Upstream	Downstream
Invert: -1.11 ft	Invert: -3.22 ft
Manning's N: 0.0240	Manning's N: 0.0240
Geometry: Circular	Geometry: Circular
Max Depth: 2.00 ft	Max Depth: 2.00 ft
Bottom Clip	

Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	127.02 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: L-1890P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.20 ft	Invert:	1.20 ft
From Node:	B-16	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	21	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	1278.76 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: L-1900P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.20 ft	Invert:	-1.20 ft
From Node:	STORAGE ON SITE	Manning's N:	0.0200	Manning's N:	0.0200
	19	Geometry: Circular		Geometry: Circular	
To Node:	STORAGE ON SITE	Max Depth:	2.00 ft	Max Depth:	2.00 ft
	21	Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Damping:	0.0000 ft	Ref Node:		Ref Node:	
Length:	1628.18 ft	Manning's N:	0.0000	Manning's N:	0.0000
FHWA Code:	0	Top Clip			
Entr Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Exit Loss Coef:	0.00	Op Table:		Op Table:	
Bend Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Location:	0.00 dec	Manning's N:	0.0000	Manning's N:	0.0000
Energy Switch:	Energy				
Comment:					

Pipe Link: L-1910P		Upstream		Downstream	
Scenario:	Future	Invert:	-1.20 ft	Invert:	-1.20 ft
From Node:	B-7	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	STORAGE ON SITE 21	Geometry: Circular		Geometry: Circular	
		Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	495.35 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Rating Curve Link: L-1920RC	
Scenario:	Future
From Node:	STORAGE ON SITE 21
To Node:	B-3
Link Count:	1
Flow Direction:	Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 4CFS	1.66	STORAGE ON SITE 21	0.51	STORAGE ON SITE 21

Comment: John P Lyons Phase 2

Pipe Link: L-1930P		Upstream		Downstream	
Scenario:	Future	Invert:	0.00 ft	Invert:	0.00 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	B-8	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	680.78 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: L-1940P		Upstream		Downstream	
Scenario:	Future	Invert:	-2.50 ft	Invert:	-2.50 ft
From Node:	B-11	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-12	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1091.90 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1950P		Upstream		Downstream	
Scenario:	Future	Invert:	2.50 ft	Invert:	2.50 ft
From Node:	STORAGE ON SITE 15	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	STORAGE ON 52ND	Max Depth:	3.00 ft	Max Depth:	3.00 ft
		Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Damping:	0.0000 ft	Ref Node:		Ref Node:	
Length:	150.54 ft	Manning's N:	0.0000	Manning's N:	0.0000
FHWA Code:	0	Top Clip			
Entr Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Exit Loss Coef:	0.00	Op Table:		Op Table:	
Bend Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Location:	0.00 dec	Manning's N:	0.0000	Manning's N:	0.0000
Energy Switch:	Energy				

Comment:

Drop Structure Link: L-1970DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-3	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - N PARK RD	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	11	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000

		Top Clip			
Damping:	0.0000 ft				
Length:	840.75 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.20 ft	Ref Node:	
Control Elevation:	4.20 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1980DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-7	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - N PARK RD	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	4	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	496.61 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.00 ft	Ref Node:	
Control Elevation:	5.00 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1990DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-8	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - N	Geometry: Circular		Geometry: Circular	
	PARK RD	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	**Bottom Clip**			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	**Top Clip**			
Length:	573.18 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.80 ft		

Control Elevation:	4.80 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2000DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-4	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - N	Geometry: Circular		Geometry: Circular	
	PARK RD	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	4	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	1244.57 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	5.40 ft
Control Elevation:	5.40 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2010DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	FUTURE EXFIL - N PARK RD	Max Depth:	3.00 ft	Max Depth:	3.00 ft
		Bottom Clip			
Link Count:	4	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Solution:	Combine	Ref Node:		Ref Node:	
Increments:	0	Manning's N:	0.0000	Manning's N:	0.0000
Pipe Count:	1	Top Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1190.28 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	3.50 ft	Op Table:	
Control Elevation:	3.50 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2020DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-14	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - S	Geometry: Circular		Geometry: Circular	

	PARK RD	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	11	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	305.78 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.70 ft	Ref Node:	
Control Elevation:	5.70 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2030DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	FUTURE EXFIL - S PARK RD	Max Depth:	3.00 ft	Max Depth:	3.00 ft
		Bottom Clip			
Link Count:	10	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Solution:	Combine	Ref Node:		Ref Node:	
Increments:	0	Manning's N:	0.0000	Manning's N:	0.0000
Pipe Count:	1	Top Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	505.40 ft	Op Table:		Op Table:	

FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00				
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	3.80 ft
Control Elevation:	3.80 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2040DS

Scenario:	Future
From Node:	B-27
To Node:	FUTURE EXFIL - INFINITY AZURE
Link Count:	4
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	235.84 ft
FHWA Code:	0
Entr Loss Coef:	0.00
Exit Loss Coef:	0.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe

Invert:	1.00 ft
Manning's N:	0.0200

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe

Invert:	1.00 ft
Manning's N:	0.0200

Geometry: Circular

Max Depth:	3.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	4.80 ft
Control Elevation:	4.80 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2050DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-28	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - INFINITY AZURE	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	5	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	180.25 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	4.80 ft
Control Elevation:	4.80 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2060DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-29	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - INFINITY AZURE	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	386.59 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.80 ft	Ref Node:	
Control Elevation:	4.80 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2070DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-31	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - INFINITY AZURE	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	18	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	323.35 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.80 ft	Ref Node:	
Control Elevation:	4.80 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Rating Curve Link: L-2080RC

Scenario: Future
From Node: STORAGE ON SITE 20
To Node: B-3
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 5.76CFS	2.00	B-15	0.00	B-15

Comment: 25th street
5.76CFS from plans

Drop Structure Link: L-2090DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-35	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL - SW 36TH CT	Geometry: Circular		Geometry: Circular	
		Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	9	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	20.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.00 ft	Op Table:	
Control Elevation:	7.00 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2100DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	1.00 ft	Invert:	1.00 ft
From Node:	B-4	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL -	Geometry: Circular		Geometry: Circular	

	SW 31ST AVE	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	25	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	20.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.20 ft	Ref Node:	
Control Elevation:	5.20 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2110DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.00 ft	Invert:	2.00 ft
From Node:	B-38	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL -	Geometry: Circular		Geometry: Circular	
	SW 52ND AVE	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	17	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	30.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	

Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1	**Bottom Clip**	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	**Top Clip**	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	8.20 ft	Op Table:	
Control Elevation:	8.20 ft	Ref Node:	
Max Depth:	999.00 ft	**Discharge Coefficients**	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-2120DS		Upstream Pipe		Downstream Pipe	
Scenario:	Future	Invert:	2.00 ft	Invert:	2.00 ft
From Node:	B-36	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	FUTURE EXFIL -	Geometry: Circular		Geometry: Circular	
	SW 52ND AVE	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	17	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	30.00 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.00	Ref Node:		Ref Node:	
Exit Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component

Weir:	1	**Bottom Clip**	

Weir Count:	1		
Weir Flow Direction:	Both	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:	
Weir Type:	Horizontal	Ref Node:	
Geometry Type:	Rectangular	Top Clip	
Invert:	8.20 ft	Default:	0.00 ft
Control Elevation:	8.20 ft	Op Table:	
Max Depth:	999.00 ft	Ref Node:	
Max Width:	10.00 ft	Discharge Coefficients	
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Weir Link: L-0010W

Scenario:	Proposed	Bottom Clip	
From Node:	B-1	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0020W

Scenario:	Proposed	Bottom Clip	
From Node:	B-1	Default:	0.00 ft
To Node:	B-12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Weir Link: L-0030W

Scenario:	Proposed
From Node:	B-12
To Node:	B-11
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	6.76 ft
Control Elevation:	6.76 ft
Cross Section:	4

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Weir Link: L-0040W

Scenario:	Proposed
From Node:	B-2
To Node:	B-12
Link Count:	1
Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Broad Crested Vertical
Geometry Type:	Irregular
Invert:	3.44 ft
Control Elevation:	3.44 ft
Cross Section:	3

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	2.800
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Comment:

Weir Link: L-0050W

Scenario:	Proposed
From Node:	B-11
To Node:	B-10
Link Count:	1

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Flow Direction:	Both		
Damping:	0.0000 ft	Top Clip	
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.76 ft	Ref Node:	
Control Elevation:	6.76 ft	Discharge Coefficients	
Cross Section:	4	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0060W

Scenario:	Proposed	Bottom Clip	
From Node:	B-11	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0070W

Scenario:	Proposed	Bottom Clip	
From Node:	B-10	Default:	0.00 ft
To Node:	B-2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.44 ft	Discharge Coefficients	
Control Elevation:	3.44 ft	Weir Default:	2.800
Cross Section:	3	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0080W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-10	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	**Discharge Coefficients**	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0090W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-11	Default:	0.00 ft
To Node:	B-13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0100W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-13	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	**Discharge Coefficients**	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0110W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-14	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0120W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-14	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0130W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-15	Default:	0.00 ft
To Node:	B-10	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-0.29 ft	Ref Node:	
Control Elevation:	-0.29 ft	Discharge Coefficients	
Cross Section:	6	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0140W

Scenario:	Proposed	Bottom Clip	
From Node:	B-14	Default:	0.00 ft
To Node:	B-17	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0150W

Scenario:	Proposed	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	Discharge Coefficients	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0160W

Scenario:	Proposed	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	Discharge Coefficients	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0170W

Scenario:	Proposed	Bottom Clip	
From Node:	B-15	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.04 ft	Discharge Coefficients	
Control Elevation:	4.04 ft	Weir Default:	2.800
Cross Section:	8	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0180W

Scenario:	Proposed	Bottom Clip	
From Node:	B-17	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	8.19 ft	Discharge Coefficients	
Control Elevation:	8.19 ft	Weir Default:	2.800
Cross Section:	15	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0190W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-16	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	**Discharge Coefficients**	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0200W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-9	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.97 ft	**Discharge Coefficients**	
Control Elevation:	4.97 ft	Weir Default:	2.800
Cross Section:	12	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0210W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-8	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-1.33 ft	Ref Node:	
Control Elevation:	-1.33 ft	Discharge Coefficients	
Cross Section:	11	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0220W

Scenario:	Proposed	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	
Control Elevation:	-1.33 ft	Weir Default:	2.800
Cross Section:	11	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0230W

Scenario:	Proposed	Bottom Clip	
From Node:	B-7	Default:	0.00 ft
To Node:	B-8	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0240W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-15	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.47 ft	**Discharge Coefficients**	
Control Elevation:	4.47 ft	Weir Default:	2.800
Cross Section:	10	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0250W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-16	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.86 ft	**Discharge Coefficients**	
Control Elevation:	3.86 ft	Weir Default:	2.800
Cross Section:	9	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0260W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	8.19 ft	**Discharge Coefficients**	
Control Elevation:	8.19 ft	Weir Default:	2.800
Cross Section:	15	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0270W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.27 ft	**Discharge Coefficients**	
Control Elevation:	3.27 ft	Weir Default:	2.800
Cross Section:	16	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0280W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.17 ft	**Discharge Coefficients**	
Control Elevation:	6.17 ft	Weir Default:	2.800
Cross Section:	24	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0290W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-7	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	3.34 ft	Ref Node:	
Control Elevation:	3.34 ft	Discharge Coefficients	
Cross Section:	14	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0300W

Scenario:	Proposed	Bottom Clip	
From Node:	B-3	Default:	0.00 ft
To Node:	B-4	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0310W

Scenario:	Proposed	Bottom Clip	
From Node:	B-4	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.04 ft	Discharge Coefficients	
Control Elevation:	5.04 ft	Weir Default:	2.800
Cross Section:	13	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0320W

Scenario:	Proposed	Bottom Clip	
From Node:	B-5	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	Discharge Coefficients	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0330W

Scenario:	Proposed	Bottom Clip	
From Node:	B-3	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	Discharge Coefficients	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0340W

Scenario:	Proposed	Bottom Clip	
From Node:	B-2	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	4.40 ft	Discharge Coefficients	
Control Elevation:	4.40 ft	Weir Default:	2.800
Cross Section:	2	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0350W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-1	Default:	0.00 ft
To Node:	B-39	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	**Discharge Coefficients**	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0360W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-5	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	**Discharge Coefficients**	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0370W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-17	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	7.43 ft	Ref Node:	
Control Elevation:	7.43 ft	Discharge Coefficients	
Cross Section:	7	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0380W

Scenario:	Proposed	Bottom Clip	
From Node:	B-14	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.43 ft	Discharge Coefficients	
Control Elevation:	7.43 ft	Weir Default:	2.800
Cross Section:	7	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0390W

Scenario:	Proposed	Bottom Clip	
From Node:	B-10	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	Discharge Coefficients	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0400W

Scenario:	Proposed	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	9.48 ft	Discharge Coefficients	
Control Elevation:	9.48 ft	Weir Default:	2.800
Cross Section:	5	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0410W

Scenario:	Proposed	Bottom Clip	
From Node:	B-21	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	Discharge Coefficients	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0420W

Scenario:	Proposed	Bottom Clip	
From Node:	B-21	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.04 ft	Discharge Coefficients	
Control Elevation:	7.04 ft	Weir Default:	2.800
Cross Section:	20	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0430W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-6	Default:	0.00 ft
To Node:	B-18	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	3.43 ft	**Discharge Coefficients**	
Control Elevation:	3.43 ft	Weir Default:	2.800
Cross Section:	17	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0440W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-18	Default:	0.00 ft
To Node:	B-19	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	**Discharge Coefficients**	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0450W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-18	Default:	0.00 ft
To Node:	B-20	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.93 ft	Ref Node:	
Control Elevation:	6.93 ft	Discharge Coefficients	
Cross Section:	18	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0460W

Scenario:	Proposed	Bottom Clip	
From Node:	B-21	Default:	0.00 ft
To Node:	B-23	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	Discharge Coefficients	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0470W

Scenario:	Proposed	Bottom Clip	
From Node:	B-23	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	Discharge Coefficients	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0480W

Scenario:	Proposed	Bottom Clip	
From Node:	B-23	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.96 ft	Discharge Coefficients	
Control Elevation:	6.96 ft	Weir Default:	2.800
Cross Section:	21	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0490W

Scenario:	Proposed	Bottom Clip	
From Node:	B-33	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	Discharge Coefficients	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0500W

Scenario:	Proposed	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-33	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.07 ft	Discharge Coefficients	
Control Elevation:	6.07 ft	Weir Default:	2.800
Cross Section:	23	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0510W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.62 ft	**Discharge Coefficients**	
Control Elevation:	6.62 ft	Weir Default:	2.800
Cross Section:	22	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0520W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-35	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.17 ft	**Discharge Coefficients**	
Control Elevation:	7.17 ft	Weir Default:	2.800
Cross Section:	25	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0530W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-32	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.17 ft	Ref Node:	
Control Elevation:	6.17 ft	Discharge Coefficients	
Cross Section:	24	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0540W

Scenario:	Proposed	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.70 ft	Discharge Coefficients	
Control Elevation:	7.70 ft	Weir Default:	2.800
Cross Section:	29	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0550W

Scenario:	Proposed	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0560W

Scenario:	Proposed	Bottom Clip	
From Node:	B-32	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	Discharge Coefficients	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0570W

Scenario:	Proposed	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0580W

Scenario:	Proposed	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	B-34	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.17 ft	Discharge Coefficients	
Control Elevation:	7.17 ft	Weir Default:	2.800
Cross Section:	25	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0590W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-34	Default:	0.00 ft
To Node:	B-36	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	**Discharge Coefficients**	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0610W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-36	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.64 ft	**Discharge Coefficients**	
Control Elevation:	6.64 ft	Weir Default:	2.800
Cross Section:	28	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0620W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-36	Default:	0.00 ft
To Node:	B-38	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.99 ft	Ref Node:	
Control Elevation:	6.99 ft	Discharge Coefficients	
Cross Section:	27	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0640W

Scenario:	Proposed	Bottom Clip	
From Node:	B-38	Default:	0.00 ft
To Node:	B-37	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.64 ft	Discharge Coefficients	
Control Elevation:	6.64 ft	Weir Default:	2.800
Cross Section:	28	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0650W

Scenario:	Proposed	Bottom Clip	
From Node:	B-29	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0660W

Scenario:	Proposed	Bottom Clip	
From Node:	B-28	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0670W

Scenario:	Proposed	Bottom Clip	
From Node:	B-27	Default:	0.00 ft
To Node:	B-31	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0680W

Scenario:	Proposed	Bottom Clip	
From Node:	B-27	Default:	0.00 ft
To Node:	B-30	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.39 ft	Discharge Coefficients	
Control Elevation:	6.39 ft	Weir Default:	2.800
Cross Section:	30	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0690W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-30	Default:	0.00 ft
To Node:	B-26	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.15 ft	**Discharge Coefficients**	
Control Elevation:	5.15 ft	Weir Default:	2.800
Cross Section:	33	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0700W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-26	Default:	0.00 ft
To Node:	B-27	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.55 ft	**Discharge Coefficients**	
Control Elevation:	5.55 ft	Weir Default:	2.800
Cross Section:	34	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0710W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-27	Default:	0.00 ft
To Node:	B-28	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	4.59 ft	Ref Node:	
Control Elevation:	4.59 ft	Discharge Coefficients	
Cross Section:	32	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0720W

Scenario:	Proposed	Bottom Clip	
From Node:	B-28	Default:	0.00 ft
To Node:	B-29	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.64 ft	Discharge Coefficients	
Control Elevation:	5.64 ft	Weir Default:	2.800
Cross Section:	31	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0730W

Scenario:	Proposed	Bottom Clip	
From Node:	B-26	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.43 ft	Discharge Coefficients	
Control Elevation:	5.43 ft	Weir Default:	2.800
Cross Section:	35	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0740W

Scenario:	Proposed	Bottom Clip	
From Node:	B-24	Default:	0.00 ft
To Node:	B-40	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.67 ft	Discharge Coefficients	
Control Elevation:	5.67 ft	Weir Default:	2.800
Cross Section:	38	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0750W

Scenario:	Proposed	Bottom Clip	
From Node:	B-40	Default:	0.00 ft
To Node:	B-25	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	5.92 ft	Discharge Coefficients	
Control Elevation:	5.92 ft	Weir Default:	2.800
Cross Section:	37	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0760W

Scenario:	Proposed	Bottom Clip	
From Node:	B-24	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	Discharge Coefficients	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600

	Orifice Table:

Comment:

Weir Link: L-0770W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-40	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	**Discharge Coefficients**	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0780W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-25	Default:	0.00 ft
To Node:	B-22	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Broad Crested Vertical	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.14 ft	**Discharge Coefficients**	
Control Elevation:	6.14 ft	Weir Default:	2.800
Cross Section:	36	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0790W

Scenario:	Proposed	**Bottom Clip**	
From Node:	B-20	Default:	0.00 ft
To Node:	B-21	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	**Top Clip**	

Damping:	0.0000 ft		
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	-0.34 ft	Ref Node:	
Control Elevation:	-0.34 ft	Discharge Coefficients	
Cross Section:	19	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-0820W

Scenario:	Proposed	Bottom Clip	
From Node:	B-1	Default:	0.00 ft
To Node:	STORAGE ON SITE 2	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-0.29 ft	Discharge Coefficients	
Control Elevation:	-0.29 ft	Weir Default:	2.800
Cross Section:	1	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-0830P

		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.72 ft	Invert:	-8.91 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-12	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1462.61 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: Outfall leading from Basin 1 to Basin 12. Unknown pipe material so assuming CMP. Other drainage infrastructure modeled with stage storage nodes as it is held mostly on site (sourced from drainage reports)

Pipe Link: L-0840P		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.18 ft	Invert:	8.44 ft
From Node:	B-1	Manning's N:	0.0120	Manning's N:	0.0120
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.50 ft	Max Depth:	4.50 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2870.39 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (1 of 2 outfalls)

Pipe Link: L-0850P		Upstream		Downstream	
Scenario:	Proposed	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-39	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2648.59 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: connection between basin 1 and pembroke rd (basin 39) (2 of 2 outfalls) assuming bituminous coated pipe like other latteral on property

Weir Link: L-0860W			
Scenario:	Proposed	Bottom Clip	
From Node:	B-3	Default:	0.00 ft
To Node:	STORAGE ON SITE 3	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	-1.33 ft	Discharge Coefficients	

Control Elevation: -1.33 ft
Cross Section: 11

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Pipe Link: L-0880P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-7	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-3	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1537.48 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf
Unknown material assuming HDPE due to being connected to a pump station

Future: upsized from 24" pipe to 36" pipe

Rating Curve Link: L-0890RC

Scenario: Proposed
From Node: B-3
To Node: B-11
Link Count: 1
Flow Direction: Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	1.50	B-3	0.50	B-3

Comment: 3 CFS PUMP FOUND K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf PAGE 107

Pipe Link: L-0910P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.11 ft	Invert:	-3.22 ft

From Node:	B-9	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	20	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	715.54 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0930P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-9	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	872.92 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0940P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.90 ft	Invert:	-2.22 ft
From Node:	B-15	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-17	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	910.18 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			

Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: CONNECTED BASED ON OLD SWMP FOUND HERE K:\FTL_Civil\143 Jobs\143586100 Pembroke Pk Stormwater MP Update\Data Collection\Permits\2014 New proposed lake and drainage system\0102167.pdf.pdf

Pipe Link: L-0990P		Upstream		Downstream	
Scenario:	Proposed	Invert:	0.43 ft	Invert:	0.12 ft
From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.25 ft	Max Depth:	1.25 ft
Flow Direction:	None	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2490.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1020P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.60 ft	Invert:	1.60 ft
From Node:	B-39	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-6	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	7099.35 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: pembroke park road feeding into DOT system assuming same material as previous pipes in system (Bitumous Coated Pipe)

Pipe Link: L-1060P		Upstream		Downstream	
Scenario:	Proposed	Invert:	7.40 ft	Invert:	6.40 ft
From Node:	B-4	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-5	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.90 ft	Max Depth:	0.90 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2152.81 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: LOCAL SYSTEM FEEDS INTO BASIN 5 AND THEN SITS IN A RETENTION AREA BEFORE GOING INTO THE DOT SYSTEM PAST A CONTROL STRUCTURE

Pipe Link: L-1080P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.33 ft	Invert:	-1.33 ft
From Node:	B-9	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-3	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Flow Direction:	Positive	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	300.00 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1120P		Upstream		Downstream	
Scenario:	Proposed	Invert:	8.18 ft	Invert:	2.90 ft
From Node:	B-10	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-11	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	7.42 ft	Max Depth:	7.42 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1956.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000

Exit Loss Coef:	0.00			Top Clip	
Bend Loss Coef:	0.00		Default:	0.00 ft	Default: 0.00 ft
Bend Location:	0.00 dec		Op Table:		Op Table:
Energy Switch:	Energy		Ref Node:		Ref Node:
			Manning's N:	0.0000	Manning's N: 0.0000

Comment: TWO OUTLETS LEADING INTO LAKE COMBINED INTO ONE PIPE (BOTH PVC ONE 77" THE SECOND 12")

Weir Link: L-1130W

Scenario:	Proposed	Bottom Clip	
From Node:	B-13	Default:	0.00 ft
To Node:	STORAGE ON SITE 5	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.76 ft	Discharge Coefficients	
Control Elevation:	6.76 ft	Weir Default:	2.800
Cross Section:	4	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1140P		Upstream		Downstream	
Scenario:	Proposed	Invert:	1.25 ft	Invert:	-1.70 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0100	Manning's N:	0.0100
		Geometry: Circular		Geometry: Circular	
To Node:	B-14	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	798.60 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1150P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.17 ft	Invert:	-4.15 ft

From Node:	B-17	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	19	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	1576.14 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.50	Top Clip			
Exit Loss Coef:	1.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment: PIPE CONNECTING BASINS B-17 B-16 B-6 AND B-3 MOVING FROM SW 31ST AVE CAROLINA ST AND S PARK ROAD INTO LARGE LAKE WITH PUMP STATION

Pipe Link: L-1200P		Upstream		Downstream	
Scenario:	Proposed	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-6	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-18	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1953.70 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING HDPE

Weir Link: L-1210W			
Scenario:	Proposed	Bottom Clip	
From Node:	B-18	Default:	0.00 ft
To Node:	STORAGE ON SITE 6	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.93 ft	Discharge Coefficients	
Control Elevation:	6.93 ft	Weir Default:	2.800
Cross Section:	18	Weir Table:	

Orifice Default:	0.600
Orifice Table:	

Comment:

Pipe Link: L-1250P		Upstream		Downstream	
Scenario:	Proposed	Invert:	0.01 ft	Invert:	-1.11 ft
From Node:	B-33	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-32	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	692.87 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING PIPE MATERIAL AND SIZE IS 1" AND HDPE

Pipe Link: L-1260P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.49 ft	Invert:	2.47 ft
From Node:	B-32	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-35	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1629.83 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1270W			
Scenario:	Proposed	Bottom Clip	
From Node:	B-32	Default:	0.00 ft

To Node:	STORAGE ON SITE 9		
Link Count:	1	Op Table:	
Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Broad Crested Vertical	Default:	0.00 ft
Geometry Type:	Irregular	Op Table:	
Invert:	6.99 ft	Ref Node:	
Control Elevation:	6.99 ft	Discharge Coefficients	
Cross Section:	27	Weir Default:	2.800
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-1290W

Scenario:	Proposed	Bottom Clip	
From Node:	B-35	Default:	0.00 ft
To Node:	STORAGE ON SITE 11	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Weir Link: L-1300W

Scenario:	Proposed	Bottom Clip	
From Node:	B-36	Default:	0.00 ft
To Node:	STORAGE ON SITE 12	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	7.93 ft	Discharge Coefficients	
Control Elevation:	7.93 ft	Weir Default:	2.800
Cross Section:	26	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Comment:

Pipe Link: L-1310P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-35	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-36	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1532.73 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1320P		Upstream		Downstream	
Scenario:	Proposed	Invert:	4.79 ft	Invert:	4.69 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-38	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1068.86 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Weir Link: L-1330W			
Scenario:	Proposed	Bottom Clip	
From Node:	B-38	Default:	0.00 ft
To Node:	STORAGE ON SITE 13	Op Table:	
Link Count:	1	Ref Node:	
Flow Direction:	Both	Top Clip	
Damping:	0.0000 ft	Default:	0.00 ft
Weir Type:	Horizontal	Op Table:	
Geometry Type:	Irregular	Ref Node:	
Invert:	6.99 ft	Discharge Coefficients	
Control Elevation:	6.99 ft	Weir Default:	2.800

Cross Section: 27

Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Pipe Link: L-1340P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.10 ft	Invert:	7.05 ft
From Node:	B-38	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-34	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	2528.34 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1400P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-31	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	936.01 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1410P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.40 ft	Invert:	-1.30 ft

From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	396.60 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1420P		Upstream		Downstream	
Scenario:	Proposed	Invert:	0.54 ft	Invert:	-0.40 ft
From Node:	B-29	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-28	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	283.66 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: ASSUMING 1" CMP

Pipe Link: L-1430P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.40 ft	Invert:	-0.70 ft
From Node:	B-28	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-27	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	261.31 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	

Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1440P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.13 ft	Invert:	-1.00 ft
From Node:	B-27	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-30	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	696.58 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1450P		Upstream		Downstream	
Scenario:	Proposed	Invert:	0.90 ft	Invert:	-0.84 ft
From Node:	B-30	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	B-26	Geometry:	Circular	Geometry:	Circular
Link Count:	1	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	374.43 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.50	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1500P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-40	Geometry:	Circular	Geometry:	Circular

Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	821.13 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1510P		Upstream		Downstream	
Scenario:	Proposed	Invert:	1.26 ft	Invert:	-0.98 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	B-26	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	937.41 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.90	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	1.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000

Comment: POTENTIAL DISCHARGE INTO LAKE AREA. WILL NEED FURTHER RESEARCH

Drop Structure Link: L-1580DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	1	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	297.21 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000

Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment: assumed invert and control elevation as catch basin data was not available. assumption based on raster elevations for general area

Drop Structure Comment: drop structure used to model the flow of water into a drainage structure and into the local drainage system. the following stage volume node represents the designed storage for the site from previous reports for permits.

Drop Structure Link: L-1590DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	3.28 ft	Invert:	2.90 ft
From Node:	B-1	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE 2	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	288.51 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1

Bottom Clip

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1600DS

Scenario:	Proposed
From Node:	B-2
To Node:	STORAGE ON SITE 18
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	262.15 ft
FHWA Code:	0
Entr Loss Coef:	0.90
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe

Invert:	3.28 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe

Invert:	2.90 ft
Manning's N:	0.0240

Geometry: Circular

Max Depth:	1.50 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	8.78 ft
Control Elevation:	8.78 ft
Max Depth:	999.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Max Width:	10.00 ft		
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1610DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-1.40 ft	Invert:	-3.40 ft
From Node:	B-3	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	3	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	767.89 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.40 ft	Op Table:	
Control Elevation:	5.40 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1620DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-1.92 ft	Invert:	-2.12 ft
From Node:	B-10	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	4	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	371.12 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	4.08 ft	Ref Node:	
Control Elevation:	4.08 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1630DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-18	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	6	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	

Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	254.22 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.40 ft	Op Table:	
Control Elevation:	7.40 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1640DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-13	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	5	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	277.27 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.00 ft	Ref Node:	
Control Elevation:	5.00 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1650DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	1.90 ft	Invert:	-1.75 ft
From Node:	B-22	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	8	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	445.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular		

Invert:	7.40 ft
Control Elevation:	7.40 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1660DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-25	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	889.88 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component	
Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	5.48 ft
Control Elevation:	5.48 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Bottom Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Top Clip	
Default:	0.00 ft
Op Table:	
Ref Node:	
Discharge Coefficients	
Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1670DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-0.02 ft	Invert:	-0.22 ft
From Node:	B-40	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	17	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	308.92 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.48 ft	Op Table:	
Control Elevation:	5.48 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1680DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-30	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	

	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	239.04 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	5.10 ft	Op Table:	
Control Elevation:	5.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1690DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	-0.40 ft	Invert:	-1.30 ft
From Node:	B-31	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	15	Max Depth:	1.50 ft	Max Depth:	1.50 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	622.33 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	

Entr Loss Coef:	0.90	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	5.10 ft	Ref Node:	
Control Elevation:	5.10 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1700DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	2.01 ft	Invert:	0.21 ft
From Node:	B-34	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 15	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	984.42 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip
Weir:	1	

Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.01 ft
Control Elevation:	7.01 ft
Max Depth:	999.00 ft
Max Width:	10.00 ft
Fillet:	0.00 ft

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Weir Default:	3.200
Weir Table:	
Orifice Default:	0.600
Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1710DS

Scenario:	Proposed
From Node:	B-32
To Node:	STORAGE ON SITE
	9
Link Count:	1
Flow Direction:	Both
Solution:	Combine
Increments:	0
Pipe Count:	1
Damping:	0.0000 ft
Length:	261.51 ft
FHWA Code:	0
Entr Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Bend Location:	0.00 dec
Energy Switch:	Energy

Upstream Pipe

Invert:	2.49 ft
Manning's N:	0.0100

Geometry: Circular

Max Depth:	1.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Downstream Pipe

Invert:	2.47 ft
Manning's N:	0.0100

Geometry: Circular

Max Depth:	1.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	
Manning's N:	0.0000

Pipe Comment:

Weir Component

Weir:	1
Weir Count:	1
Weir Flow Direction:	Both
Damping:	0.0000 ft
Weir Type:	Horizontal
Geometry Type:	Rectangular
Invert:	7.49 ft
Control Elevation:	7.49 ft
Max Depth:	999.00 ft

Bottom Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Top Clip

Default:	0.00 ft
Op Table:	
Ref Node:	

Discharge Coefficients

Max Width:	10.00 ft		
Fillet:	0.00 ft	Weir Default:	3.200
		Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1720DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	2.10 ft	Invert:	2.01 ft
From Node:	B-37	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE 14	Geometry: Circular		Geometry: Circular	
		Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	441.61 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.10 ft	Op Table:	
Control Elevation:	7.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1730DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-35	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	11	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	449.58 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	Top Clip	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.96 ft	Ref Node:	
Control Elevation:	7.96 ft	Discharge Coefficients	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1740DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	2.10 ft	Invert:	2.01 ft
From Node:	B-38	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	13	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	

Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	385.31 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component			
Weir:	1	Bottom Clip	
Weir Count:	1	Default:	0.00 ft
Weir Flow Direction:	Both	Op Table:	
Damping:	0.0000 ft	Ref Node:	
Weir Type:	Horizontal	Top Clip	
Geometry Type:	Rectangular	Default:	0.00 ft
Invert:	7.10 ft	Op Table:	
Control Elevation:	7.10 ft	Ref Node:	
Max Depth:	999.00 ft	Discharge Coefficients	
Max Width:	10.00 ft	Weir Default:	3.200
Fillet:	0.00 ft	Weir Table:	
		Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Drop Structure Link: L-1750DS		Upstream Pipe		Downstream Pipe	
Scenario:	Proposed	Invert:	2.96 ft	Invert:	2.87 ft
From Node:	B-36	Manning's N:	0.0100	Manning's N:	0.0100
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	12	Max Depth:	1.00 ft	Max Depth:	1.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Solution:	Combine	Op Table:		Op Table:	
Increments:	0	Ref Node:		Ref Node:	
Pipe Count:	1	Manning's N:	0.0000	Manning's N:	0.0000
Damping:	0.0000 ft	Top Clip			
Length:	732.41 ft	Default:	0.00 ft	Default:	0.00 ft
FHWA Code:	0	Op Table:		Op Table:	
Entr Loss Coef:	0.50	Ref Node:		Ref Node:	
Exit Loss Coef:	1.00	Manning's N:	0.0000	Manning's N:	0.0000
Bend Loss Coef:	0.00				
Bend Location:	0.00 dec				
Energy Switch:	Energy				

Pipe Comment:

Weir Component		Bottom Clip	
Weir:	1	Default:	0.00 ft
Weir Count:	1	Op Table:	
Weir Flow Direction:	Both	Ref Node:	
Damping:	0.0000 ft	**Top Clip**	
Weir Type:	Horizontal	Default:	0.00 ft
Geometry Type:	Rectangular	Op Table:	
Invert:	7.96 ft	Ref Node:	
Control Elevation:	7.96 ft	**Discharge Coefficients**	
Max Depth:	999.00 ft	Weir Default:	3.200
Max Width:	10.00 ft	Weir Table:	
Fillet:	0.00 ft	Orifice Default:	0.600
		Orifice Table:	

Weir Comment:

Drop Structure Comment:

Rating Curve Link: L-1820RC

Scenario: Proposed
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP7CFS	2.00	B-3	0.50	

Comment: Has a 7cfs limit to Pembroke Road/golf course based on permitting but has two pumps inside that can pump 11cfs (not allowed to run at the same time due to permit)
- From Stefano's meeting with the town 10/25/2023

Rating Curve Link: L-1830RC

Scenario: Proposed
From Node: B-3
To Node: DISCHARGE TO GOLF COURSE
Link Count: 1
Flow Direction: Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 80CFS	1.00	B-3	0.50	B-3

Comment: Set of 3, one out for repair (still included)
VERIFY

Rating Curve Link: L-1850RC	
Scenario:	Proposed
From Node:	B-7
To Node:	DISCHARGE TO GOLF COURSE
Link Count:	1
Flow Direction:	Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP3CFS	1.00	B-7	0.50	B-7

Comment:

Pipe Link: L-1870P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.11 ft	Invert:	-3.22 ft
From Node:	B-15	Manning's N:	0.0240	Manning's N:	0.0240
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	20	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	127.02 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1890P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.20 ft	Invert:	1.20 ft
From Node:	B-16	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	STORAGE ON SITE	Geometry: Circular		Geometry: Circular	
	21	Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	1278.76 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Pipe Link: L-1900P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.20 ft	Invert:	-1.20 ft
From Node:	STORAGE ON SITE 19	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	STORAGE ON SITE 21	Max Depth:	2.00 ft	Max Depth:	2.00 ft
		Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Damping:	0.0000 ft	Ref Node:		Ref Node:	
Length:	1628.18 ft	Manning's N:	0.0000	Manning's N:	0.0000
FHWA Code:	0	Top Clip			
Entr Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Exit Loss Coef:	0.00	Op Table:		Op Table:	
Bend Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Location:	0.00 dec	Manning's N:	0.0000	Manning's N:	0.0000
Energy Switch:	Energy				

Comment:

Pipe Link: L-1910P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-1.20 ft	Invert:	-1.20 ft
From Node:	B-7	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	STORAGE ON SITE 21	Geometry: Circular		Geometry: Circular	
		Max Depth:	2.00 ft	Max Depth:	2.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	495.35 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000

Comment:

Rating Curve Link: L-1920RC

Scenario: Proposed
From Node: STORAGE ON SITE 21
To Node: B-3
Link Count: 1
Flow Direction: Positive

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 4CFS	1.66	STORAGE ON SITE 21	0.51	STORAGE ON SITE 21

Comment: John P Lyons Phase 2

Pipe Link: L-1930P		Upstream		Downstream	
Scenario:	Proposed	Invert:	0.00 ft	Invert:	0.00 ft
From Node:	STORAGE ON SITE 20	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	B-8	Max Depth:	3.00 ft	Max Depth:	3.00 ft
Link Count:	1	Bottom Clip			
Flow Direction:	Both	Default:	0.00 ft	Default:	0.00 ft
Damping:	0.0000 ft	Op Table:		Op Table:	
Length:	680.78 ft	Ref Node:		Ref Node:	
FHWA Code:	0	Manning's N:	0.0000	Manning's N:	0.0000
Entr Loss Coef:	0.00	Top Clip			
Exit Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Loss Coef:	0.00	Op Table:		Op Table:	
Bend Location:	0.00 dec	Ref Node:		Ref Node:	
Energy Switch:	Energy	Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: L-1940P		Upstream		Downstream	
Scenario:	Proposed	Invert:	-2.50 ft	Invert:	-2.50 ft
From Node:	B-11	Manning's N:	0.0200	Manning's N:	0.0200
To Node:	B-12	Geometry: Circular		Geometry: Circular	
Link Count:	1	Max Depth:	4.00 ft	Max Depth:	4.00 ft
Flow Direction:	Both	Bottom Clip			
Damping:	0.0000 ft	Default:	0.00 ft	Default:	0.00 ft
Length:	1091.90 ft	Op Table:		Op Table:	
FHWA Code:	0	Ref Node:		Ref Node:	
Entr Loss Coef:	0.00	Manning's N:	0.0000	Manning's N:	0.0000
Exit Loss Coef:	0.00	Top Clip			
Bend Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Bend Location:	0.00 dec	Op Table:		Op Table:	
Energy Switch:	Energy	Ref Node:		Ref Node:	
		Manning's N:	0.0000	Manning's N:	0.0000
Comment:					

Pipe Link: L-1950P		Upstream		Downstream	
Scenario:	Proposed	Invert:	2.50 ft	Invert:	2.50 ft
From Node:	STORAGE ON SITE 15	Manning's N:	0.0200	Manning's N:	0.0200
		Geometry: Circular		Geometry: Circular	
To Node:	STORAGE ON 52ND	Max Depth:	3.00 ft	Max Depth:	3.00 ft
		Bottom Clip			
Link Count:	1	Default:	0.00 ft	Default:	0.00 ft
Flow Direction:	Both	Op Table:		Op Table:	
Damping:	0.0000 ft	Ref Node:		Ref Node:	
Length:	167.62 ft	Manning's N:	0.0000	Manning's N:	0.0000
FHWA Code:	0	Top Clip			

Entr Loss Coef:	0.00	Default:	0.00 ft	Default:	0.00 ft
Exit Loss Coef:	0.00	Op Table:		Op Table:	
Bend Loss Coef:	0.00	Ref Node:		Ref Node:	
Bend Location:	0.00 dec	Manning's N:	0.0000	Manning's N:	0.0000
Energy Switch:	Energy				

Comment:

Rating Curve Link: L-1960RC

Scenario: Proposed
From Node: B-15
To Node: B-3
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
PUMP 5.76CFS	2.00	B-15	0.00	B-15

Comment: 25th street
5.76CFS from plans

Simulation: 10 yr 24 hr

Scenario: Existing
Run Date/Time: 4/15/2024 4:20:54 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	36.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0001 ft
Max dZ: 100.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0100 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 8.85 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0100 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100 yr 72 hr

Scenario: Existing
Run Date/Time: 4/15/2024 4:22:27 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0001 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	100.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0000 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	18.00 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0100 ft	Dflt Damping (1D):	0.0100 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 25 yr 72 hr

Scenario:	Existing
Run Date/Time:	4/15/2024 4:26:30 PM
Program Version:	ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0001 ft
Max dZ: 100.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0100 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 13.30 in
Storm Duration: 72.0000 hr
Dflt Damping (1D): 0.0100 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 10 yr 24 hr

Scenario: Future
Run Date/Time: 5/14/2024 12:00:22 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	36.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0001 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	100.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0000 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	8.85 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0100 ft	Dflt Damping (1D):	0.0100 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 100 yr 72 hr

Scenario:	Future
Run Date/Time:	5/14/2024 12:03:38 PM
Program Version:	ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0001 ft
Max dZ: 100.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0100 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 18.00 in
Storm Duration: 72.0000 hr
Dflt Damping (1D): 0.0100 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 25 yr 72 hr

Scenario: Future
Run Date/Time: 5/14/2024 12:10:11 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0001 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	100.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0000 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	13.30 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0100 ft	Dflt Damping (1D):	0.0100 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 10 yr 24 hr

Scenario:	Proposed
Run Date/Time:	4/15/2024 4:47:02 PM
Program Version:	ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	36.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0001 ft
Max dZ: 100.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0100 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 8.85 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0100 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Simulation: 100 yr 72 hr

Scenario: Proposed
Run Date/Time: 4/15/2024 4:50:02 PM
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:

Conductivity Set:	
Leakage Set:	

Tolerances & Options

Time Marching:	SAOR	IA Recovery Time:	24.0000 hr
Max Iterations:	6	ET for Manual Basins:	False
Over-Relax Weight Fact:	0.5 dec		
dZ Tolerance:	0.0001 ft	Smp/Man Basin Rain Opt:	Global
Max dZ:	100.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0000 ft	Rainfall Name:	~SFWMD-72
		Rainfall Amount:	18.00 in
Edge Length Option:	Automatic	Storm Duration:	72.0000 hr
Dflt Damping (2D):	0.0100 ft	Dflt Damping (1D):	0.0100 ft
Min Node Srf Area (2D):	100 ft2	Min Node Srf Area (1D):	100 ft2
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:

Simulation: 25 yr 72 hr

Scenario:	Proposed
Run Date/Time:	4/15/2024 4:57:00 PM
Program Version:	ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	96.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.0500	900.0000
Max Calculation Time:		10.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:
Reference ET Folder:
Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:
Extern Hydrograph Set:
Curve Number Set: Site
Green-Ampt Set:
Vertical Layers Set:
Impervious Set: site
Roughness Set:
Crop Coef Set:
Fillable Porosity Set:
Conductivity Set:
Leakage Set:

Tolerances & Options

Time Marching: SAOR
Max Iterations: 6
Over-Relax Weight Fact: 0.5 dec
dZ Tolerance: 0.0001 ft
Max dZ: 100.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic
Dflt Damping (2D): 0.0100 ft
Min Node Srf Area (2D): 100 ft2
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr
ET for Manual Basins: False
Smp/Man Basin Rain Opt: Global
OF Region Rain Opt: Global
Rainfall Name: ~SFWMD-72
Rainfall Amount: 13.30 in
Storm Duration: 72.0000 hr
Dflt Damping (1D): 0.0100 ft
Min Node Srf Area (1D): 100 ft2
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Node Name	Maximum Stage [ft]
Existing	10 yr 24 hr	B-1	4.69
Existing	10 yr 24 hr	B-10	4.87
Existing	10 yr 24 hr	B-11	4.69
Existing	10 yr 24 hr	B-12	4.69
Existing	10 yr 24 hr	B-13	6.87
Existing	10 yr 24 hr	B-14	4.71
Existing	10 yr 24 hr	B-15	4.76
Existing	10 yr 24 hr	B-16	4.59
Existing	10 yr 24 hr	B-17	4.70
Existing	10 yr 24 hr	B-18	4.60
Existing	10 yr 24 hr	B-19	5.53
Existing	10 yr 24 hr	B-2	4.69
Existing	10 yr 24 hr	B-20	4.35
Existing	10 yr 24 hr	B-21	4.35
Existing	10 yr 24 hr	B-22	6.71
Existing	10 yr 24 hr	B-23	6.85
Existing	10 yr 24 hr	B-24	6.71
Existing	10 yr 24 hr	B-25	6.70
Existing	10 yr 24 hr	B-26	6.71
Existing	10 yr 24 hr	B-27	6.71
Existing	10 yr 24 hr	B-28	6.71
Existing	10 yr 24 hr	B-29	6.70
Existing	10 yr 24 hr	B-3	5.23
Existing	10 yr 24 hr	B-30	6.71
Existing	10 yr 24 hr	B-31	6.70
Existing	10 yr 24 hr	B-32	6.71
Existing	10 yr 24 hr	B-33	6.71
Existing	10 yr 24 hr	B-34	6.71
Existing	10 yr 24 hr	B-35	7.49
Existing	10 yr 24 hr	B-36	8.01
Existing	10 yr 24 hr	B-37	8.01
Existing	10 yr 24 hr	B-38	8.01
Existing	10 yr 24 hr	B-39	4.69
Existing	10 yr 24 hr	B-4	5.28
Existing	10 yr 24 hr	B-40	6.70
Existing	10 yr 24 hr	B-5	4.60
Existing	10 yr 24 hr	B-6	4.60
Existing	10 yr 24 hr	B-7	4.59
Existing	10 yr 24 hr	B-8	5.22
Existing	10 yr 24 hr	B-9	4.59
Future	10 yr 24 hr	B-1	4.65
Future	10 yr 24 hr	B-10	4.45

Scenario	Sim	Node Name	Maximum Stage [ft]
Future	10 yr 24 hr	B-11	4.65
Future	10 yr 24 hr	B-12	4.65
Future	10 yr 24 hr	B-13	6.87
Future	10 yr 24 hr	B-14	4.49
Future	10 yr 24 hr	B-15	4.46
Future	10 yr 24 hr	B-16	4.46
Future	10 yr 24 hr	B-17	4.46
Future	10 yr 24 hr	B-18	4.47
Future	10 yr 24 hr	B-19	5.53
Future	10 yr 24 hr	B-2	4.64
Future	10 yr 24 hr	B-20	4.35
Future	10 yr 24 hr	B-21	4.35
Future	10 yr 24 hr	B-22	6.64
Future	10 yr 24 hr	B-23	6.85
Future	10 yr 24 hr	B-24	6.64
Future	10 yr 24 hr	B-25	6.64
Future	10 yr 24 hr	B-26	6.64
Future	10 yr 24 hr	B-27	6.64
Future	10 yr 24 hr	B-28	6.64
Future	10 yr 24 hr	B-29	6.64
Future	10 yr 24 hr	B-3	4.45
Future	10 yr 24 hr	B-30	6.64
Future	10 yr 24 hr	B-31	6.64
Future	10 yr 24 hr	B-32	6.65
Future	10 yr 24 hr	B-33	6.65
Future	10 yr 24 hr	B-34	6.65
Future	10 yr 24 hr	B-35	7.48
Future	10 yr 24 hr	B-36	8.01
Future	10 yr 24 hr	B-37	8.01
Future	10 yr 24 hr	B-38	8.01
Future	10 yr 24 hr	B-39	4.65
Future	10 yr 24 hr	B-4	5.21
Future	10 yr 24 hr	B-40	6.64
Future	10 yr 24 hr	B-5	4.46
Future	10 yr 24 hr	B-6	4.46
Future	10 yr 24 hr	B-7	4.45
Future	10 yr 24 hr	B-8	4.45
Future	10 yr 24 hr	B-9	4.45
Proposed	10 yr 24 hr	B-1	4.65
Proposed	10 yr 24 hr	B-10	4.49
Proposed	10 yr 24 hr	B-11	4.65
Proposed	10 yr 24 hr	B-12	4.65

Scenario	Sim	Node Name	Maximum Stage [ft]
Proposed	10 yr 24 hr	B-13	6.87
Proposed	10 yr 24 hr	B-14	4.54
Proposed	10 yr 24 hr	B-15	4.49
Proposed	10 yr 24 hr	B-16	4.50
Proposed	10 yr 24 hr	B-17	4.49
Proposed	10 yr 24 hr	B-18	4.51
Proposed	10 yr 24 hr	B-19	5.53
Proposed	10 yr 24 hr	B-2	4.65
Proposed	10 yr 24 hr	B-20	4.35
Proposed	10 yr 24 hr	B-21	4.35
Proposed	10 yr 24 hr	B-22	6.71
Proposed	10 yr 24 hr	B-23	6.85
Proposed	10 yr 24 hr	B-24	6.71
Proposed	10 yr 24 hr	B-25	6.70
Proposed	10 yr 24 hr	B-26	6.71
Proposed	10 yr 24 hr	B-27	6.71
Proposed	10 yr 24 hr	B-28	6.71
Proposed	10 yr 24 hr	B-29	6.70
Proposed	10 yr 24 hr	B-3	4.49
Proposed	10 yr 24 hr	B-30	6.71
Proposed	10 yr 24 hr	B-31	6.70
Proposed	10 yr 24 hr	B-32	6.71
Proposed	10 yr 24 hr	B-33	6.71
Proposed	10 yr 24 hr	B-34	6.71
Proposed	10 yr 24 hr	B-35	7.49
Proposed	10 yr 24 hr	B-36	8.01
Proposed	10 yr 24 hr	B-37	8.01
Proposed	10 yr 24 hr	B-38	8.01
Proposed	10 yr 24 hr	B-39	4.65
Proposed	10 yr 24 hr	B-4	5.28
Proposed	10 yr 24 hr	B-40	6.70
Proposed	10 yr 24 hr	B-5	4.50
Proposed	10 yr 24 hr	B-6	4.50
Proposed	10 yr 24 hr	B-7	4.49
Proposed	10 yr 24 hr	B-8	4.49
Proposed	10 yr 24 hr	B-9	4.49
Existing	100 yr 72 hr	B-1	5.52
Existing	100 yr 72 hr	B-10	5.52
Existing	100 yr 72 hr	B-11	5.52
Existing	100 yr 72 hr	B-12	5.52
Existing	100 yr 72 hr	B-13	6.92
Existing	100 yr 72 hr	B-14	6.13

Scenario	Sim	Node Name	Maximum Stage [ft]
Existing	100 yr 72 hr	B-15	5.52
Existing	100 yr 72 hr	B-16	5.52
Existing	100 yr 72 hr	B-17	5.52
Existing	100 yr 72 hr	B-18	5.53
Existing	100 yr 72 hr	B-19	6.72
Existing	100 yr 72 hr	B-2	5.52
Existing	100 yr 72 hr	B-20	6.91
Existing	100 yr 72 hr	B-21	6.91
Existing	100 yr 72 hr	B-22	7.37
Existing	100 yr 72 hr	B-23	7.36
Existing	100 yr 72 hr	B-24	7.37
Existing	100 yr 72 hr	B-25	7.37
Existing	100 yr 72 hr	B-26	7.38
Existing	100 yr 72 hr	B-27	7.38
Existing	100 yr 72 hr	B-28	7.38
Existing	100 yr 72 hr	B-29	7.39
Existing	100 yr 72 hr	B-3	5.52
Existing	100 yr 72 hr	B-30	7.38
Existing	100 yr 72 hr	B-31	7.38
Existing	100 yr 72 hr	B-32	7.38
Existing	100 yr 72 hr	B-33	7.37
Existing	100 yr 72 hr	B-34	7.39
Existing	100 yr 72 hr	B-35	7.78
Existing	100 yr 72 hr	B-36	8.17
Existing	100 yr 72 hr	B-37	8.17
Existing	100 yr 72 hr	B-38	8.18
Existing	100 yr 72 hr	B-39	5.52
Existing	100 yr 72 hr	B-4	5.52
Existing	100 yr 72 hr	B-40	7.37
Existing	100 yr 72 hr	B-5	5.52
Existing	100 yr 72 hr	B-6	5.53
Existing	100 yr 72 hr	B-7	5.52
Existing	100 yr 72 hr	B-8	5.52
Existing	100 yr 72 hr	B-9	5.52
Future	100 yr 72 hr	B-1	5.53
Future	100 yr 72 hr	B-10	5.53
Future	100 yr 72 hr	B-11	5.53
Future	100 yr 72 hr	B-12	5.53
Future	100 yr 72 hr	B-13	6.92
Future	100 yr 72 hr	B-14	5.71
Future	100 yr 72 hr	B-15	5.53
Future	100 yr 72 hr	B-16	5.53

Scenario	Sim	Node Name	Maximum Stage [ft]
Future	100 yr 72 hr	B-17	5.53
Future	100 yr 72 hr	B-18	5.54
Future	100 yr 72 hr	B-19	6.72
Future	100 yr 72 hr	B-2	5.53
Future	100 yr 72 hr	B-20	6.88
Future	100 yr 72 hr	B-21	6.88
Future	100 yr 72 hr	B-22	7.36
Future	100 yr 72 hr	B-23	7.35
Future	100 yr 72 hr	B-24	7.36
Future	100 yr 72 hr	B-25	7.36
Future	100 yr 72 hr	B-26	7.36
Future	100 yr 72 hr	B-27	7.37
Future	100 yr 72 hr	B-28	7.37
Future	100 yr 72 hr	B-29	7.37
Future	100 yr 72 hr	B-3	5.52
Future	100 yr 72 hr	B-30	7.37
Future	100 yr 72 hr	B-31	7.37
Future	100 yr 72 hr	B-32	7.37
Future	100 yr 72 hr	B-33	7.36
Future	100 yr 72 hr	B-34	7.37
Future	100 yr 72 hr	B-35	7.78
Future	100 yr 72 hr	B-36	8.17
Future	100 yr 72 hr	B-37	8.17
Future	100 yr 72 hr	B-38	8.18
Future	100 yr 72 hr	B-39	5.53
Future	100 yr 72 hr	B-4	5.53
Future	100 yr 72 hr	B-40	7.36
Future	100 yr 72 hr	B-5	5.53
Future	100 yr 72 hr	B-6	5.53
Future	100 yr 72 hr	B-7	5.53
Future	100 yr 72 hr	B-8	5.52
Future	100 yr 72 hr	B-9	5.52
Proposed	100 yr 72 hr	B-1	5.54
Proposed	100 yr 72 hr	B-10	5.54
Proposed	100 yr 72 hr	B-11	5.54
Proposed	100 yr 72 hr	B-12	5.54
Proposed	100 yr 72 hr	B-13	6.92
Proposed	100 yr 72 hr	B-14	6.05
Proposed	100 yr 72 hr	B-15	5.54
Proposed	100 yr 72 hr	B-16	5.54
Proposed	100 yr 72 hr	B-17	5.54
Proposed	100 yr 72 hr	B-18	5.55

Scenario	Sim	Node Name	Maximum Stage [ft]
Proposed	100 yr 72 hr	B-19	6.72
Proposed	100 yr 72 hr	B-2	5.54
Proposed	100 yr 72 hr	B-20	6.91
Proposed	100 yr 72 hr	B-21	6.91
Proposed	100 yr 72 hr	B-22	7.37
Proposed	100 yr 72 hr	B-23	7.36
Proposed	100 yr 72 hr	B-24	7.37
Proposed	100 yr 72 hr	B-25	7.37
Proposed	100 yr 72 hr	B-26	7.38
Proposed	100 yr 72 hr	B-27	7.38
Proposed	100 yr 72 hr	B-28	7.38
Proposed	100 yr 72 hr	B-29	7.39
Proposed	100 yr 72 hr	B-3	5.54
Proposed	100 yr 72 hr	B-30	7.38
Proposed	100 yr 72 hr	B-31	7.38
Proposed	100 yr 72 hr	B-32	7.38
Proposed	100 yr 72 hr	B-33	7.37
Proposed	100 yr 72 hr	B-34	7.39
Proposed	100 yr 72 hr	B-35	7.78
Proposed	100 yr 72 hr	B-36	8.17
Proposed	100 yr 72 hr	B-37	8.17
Proposed	100 yr 72 hr	B-38	8.18
Proposed	100 yr 72 hr	B-39	5.54
Proposed	100 yr 72 hr	B-4	5.54
Proposed	100 yr 72 hr	B-40	7.37
Proposed	100 yr 72 hr	B-5	5.54
Proposed	100 yr 72 hr	B-6	5.55
Proposed	100 yr 72 hr	B-7	5.54
Proposed	100 yr 72 hr	B-8	5.54
Proposed	100 yr 72 hr	B-9	5.54
Existing	25 yr 72 hr	B-1	4.81
Existing	25 yr 72 hr	B-10	4.87
Existing	25 yr 72 hr	B-11	4.81
Existing	25 yr 72 hr	B-12	4.81
Existing	25 yr 72 hr	B-13	6.90
Existing	25 yr 72 hr	B-14	5.18
Existing	25 yr 72 hr	B-15	4.76
Existing	25 yr 72 hr	B-16	4.74
Existing	25 yr 72 hr	B-17	4.74
Existing	25 yr 72 hr	B-18	4.75
Existing	25 yr 72 hr	B-19	6.14
Existing	25 yr 72 hr	B-2	4.81

Scenario	Sim	Node Name	Maximum Stage [ft]
Existing	25 yr 72 hr	B-20	5.70
Existing	25 yr 72 hr	B-21	5.70
Existing	25 yr 72 hr	B-22	7.14
Existing	25 yr 72 hr	B-23	7.14
Existing	25 yr 72 hr	B-24	7.15
Existing	25 yr 72 hr	B-25	7.14
Existing	25 yr 72 hr	B-26	7.15
Existing	25 yr 72 hr	B-27	7.15
Existing	25 yr 72 hr	B-28	7.15
Existing	25 yr 72 hr	B-29	7.15
Existing	25 yr 72 hr	B-3	5.23
Existing	25 yr 72 hr	B-30	7.15
Existing	25 yr 72 hr	B-31	7.15
Existing	25 yr 72 hr	B-32	7.15
Existing	25 yr 72 hr	B-33	7.15
Existing	25 yr 72 hr	B-34	7.15
Existing	25 yr 72 hr	B-35	7.65
Existing	25 yr 72 hr	B-36	8.11
Existing	25 yr 72 hr	B-37	8.12
Existing	25 yr 72 hr	B-38	8.12
Existing	25 yr 72 hr	B-39	4.81
Existing	25 yr 72 hr	B-4	5.31
Existing	25 yr 72 hr	B-40	7.14
Existing	25 yr 72 hr	B-5	4.75
Existing	25 yr 72 hr	B-6	4.75
Existing	25 yr 72 hr	B-7	4.74
Existing	25 yr 72 hr	B-8	5.22
Existing	25 yr 72 hr	B-9	4.74
Future	25 yr 72 hr	B-1	4.91
Future	25 yr 72 hr	B-10	4.91
Future	25 yr 72 hr	B-11	4.91
Future	25 yr 72 hr	B-12	4.91
Future	25 yr 72 hr	B-13	6.90
Future	25 yr 72 hr	B-14	5.13
Future	25 yr 72 hr	B-15	4.91
Future	25 yr 72 hr	B-16	4.91
Future	25 yr 72 hr	B-17	4.91
Future	25 yr 72 hr	B-18	4.92
Future	25 yr 72 hr	B-19	6.14
Future	25 yr 72 hr	B-2	4.91
Future	25 yr 72 hr	B-20	5.65
Future	25 yr 72 hr	B-21	5.65

Scenario	Sim	Node Name	Maximum Stage [ft]
Future	25 yr 72 hr	B-22	7.13
Future	25 yr 72 hr	B-23	7.13
Future	25 yr 72 hr	B-24	7.13
Future	25 yr 72 hr	B-25	7.13
Future	25 yr 72 hr	B-26	7.13
Future	25 yr 72 hr	B-27	7.14
Future	25 yr 72 hr	B-28	7.14
Future	25 yr 72 hr	B-29	7.14
Future	25 yr 72 hr	B-3	4.90
Future	25 yr 72 hr	B-30	7.13
Future	25 yr 72 hr	B-31	7.14
Future	25 yr 72 hr	B-32	7.14
Future	25 yr 72 hr	B-33	7.13
Future	25 yr 72 hr	B-34	7.14
Future	25 yr 72 hr	B-35	7.65
Future	25 yr 72 hr	B-36	8.11
Future	25 yr 72 hr	B-37	8.12
Future	25 yr 72 hr	B-38	8.12
Future	25 yr 72 hr	B-39	4.91
Future	25 yr 72 hr	B-4	5.21
Future	25 yr 72 hr	B-40	7.13
Future	25 yr 72 hr	B-5	4.91
Future	25 yr 72 hr	B-6	4.92
Future	25 yr 72 hr	B-7	4.91
Future	25 yr 72 hr	B-8	4.90
Future	25 yr 72 hr	B-9	4.90
Proposed	25 yr 72 hr	B-1	4.94
Proposed	25 yr 72 hr	B-10	4.94
Proposed	25 yr 72 hr	B-11	4.95
Proposed	25 yr 72 hr	B-12	4.95
Proposed	25 yr 72 hr	B-13	6.90
Proposed	25 yr 72 hr	B-14	5.09
Proposed	25 yr 72 hr	B-15	4.94
Proposed	25 yr 72 hr	B-16	4.94
Proposed	25 yr 72 hr	B-17	4.94
Proposed	25 yr 72 hr	B-18	4.95
Proposed	25 yr 72 hr	B-19	6.14
Proposed	25 yr 72 hr	B-2	4.94
Proposed	25 yr 72 hr	B-20	5.70
Proposed	25 yr 72 hr	B-21	5.70
Proposed	25 yr 72 hr	B-22	7.14
Proposed	25 yr 72 hr	B-23	7.14

Scenario	Sim	Node Name	Maximum Stage [ft]
Proposed	25 yr 72 hr	B-24	7.15
Proposed	25 yr 72 hr	B-25	7.14
Proposed	25 yr 72 hr	B-26	7.15
Proposed	25 yr 72 hr	B-27	7.15
Proposed	25 yr 72 hr	B-28	7.15
Proposed	25 yr 72 hr	B-29	7.15
Proposed	25 yr 72 hr	B-3	4.93
Proposed	25 yr 72 hr	B-30	7.15
Proposed	25 yr 72 hr	B-31	7.15
Proposed	25 yr 72 hr	B-32	7.15
Proposed	25 yr 72 hr	B-33	7.15
Proposed	25 yr 72 hr	B-34	7.15
Proposed	25 yr 72 hr	B-35	7.65
Proposed	25 yr 72 hr	B-36	8.11
Proposed	25 yr 72 hr	B-37	8.12
Proposed	25 yr 72 hr	B-38	8.12
Proposed	25 yr 72 hr	B-39	4.94
Proposed	25 yr 72 hr	B-4	5.31
Proposed	25 yr 72 hr	B-40	7.14
Proposed	25 yr 72 hr	B-5	4.94
Proposed	25 yr 72 hr	B-6	4.95
Proposed	25 yr 72 hr	B-7	4.94
Proposed	25 yr 72 hr	B-8	4.94
Proposed	25 yr 72 hr	B-9	4.94

Agenda Item Report

Subject:	Wastewater Master Plan - Craig A. Smith and Associates, LLC
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Stanley Merantus, Public Services Director
Dept/Group:	Public Works
Recommendation for Counsel to consider:	
Background Information:	Presentation of the Wastewater Master Plan
Staff Recommendations:	
Financial Implications:	There is no financial impact.
Alternatives:	

ATTACHMENTS:

TPP_Sanitary_Sewer_Master_Plan-12-30-24
ExhibitA
ExhibitB
ExhibitC
ExhibitD
ExhibitE
ExhibitF
ExhibitG
ExhibitH
ExhibitI

TOWN OF PEMBROKE PARK

SANITARY SEWER SYSTEM MASTER PLAN

JANUARY 2025

Project No. 08-22-025

PREPARED BY

CRAIG A. SMITH & ASSOCIATES
Consulting Engineers, Planners, Surveyors
1425 E. Newport Center Drive, Deerfield Beach, FL 33442
(954) 782-8222

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SANITARY SEWER SYSTEM MASTER PLAN

1.0 GENERAL INFORMATION

1.1 History

In the 1950's, the area known today as the Town of Pembroke Park was being developed as an industrial area with some of the less attractive industries being constructed within its municipal boundaries. At that time, the Town's municipal boundaries were confined to what today makes up the eastern section of the Town. By 1957, several chemical plants had been established within the Town.

Many industrial plants were becoming operational, and several landowners in the area formed a consensus and petitioned the Legislature of the State of Florida in a special session to create the municipality of Pembroke. The Legislature approved this petition and the Town of Pembroke was formed. Shortly after its formation, the Town on December 16, 1957 passed and adopted its first zoning regulations to control the spread of objectionable industry. These regulations were most likely drafted as a direct result of the type of development that had been occurring in the area prior to it becoming a municipality.

Shortly after the Town of Pembroke was created by the Legislature of the State of Florida, this same body abolished the municipality. However, the Town of Pembroke Park was established and State Law adopted its Charter on June 20, 1959 (House Bill No. 2477). The Town's utilities consisted of small lift stations, which were built as commercial properties developed. Small forcemains interconnected these small lift stations and pumped them to the City of Hollywood's regional wastewater treatment plant. Since that time a series of small annexations and attempted annexations has slowly increased the Town's area, specifically toward the west. The final annexation was in 1978 of Hollywood Ridge Farms, which added approximately 3/8 of a square mile to the Town's area along its western boundary, which increased the Town's size to approximately 1.65 square miles.

The development of the Town of Pembroke Park occurred primarily prior to 1980 and slowed somewhat during the period between 1980 and 1990. During the period between 1990 and 1995, growth within the Town of Pembroke Park was nearly non-existent. Recently (after 1996), the Town of Pembroke Park has been experiencing a significant increase in development. During the period between 1996 and 2008 an additional 800 housing units were developed on the west side of Pembroke Park.

Between 2000 and 2020 Meekins Lake was filled to create additional industrial land. More than 2.4 million square feet of industrial warehouse was built, or is currently being built, on the infilled lake sections. The Town is undergoing a

redevelopment of the older commercial and industrial properties with single story warehouses being torn down and multi-story commercial buildings being erected in their place. This trend is expected to continue.

The ground water table is considerably high throughout the Town of Pembroke Park. This, along with ageing infrastructure (sewer pipes and sewer structures), has attributed to significant Inflow and Infiltration throughout the Town. Which has significantly impacted the operation and maintenance cost in the Town.

Many of the lift stations throughout the Town are in need of significant maintenance or replacement to address the current deterioration and improve operation and maintenance cost due to emergency breakdowns.

1.2 Service Area

The service area for the Town of Pembroke Park is zoned as commercial, light industrial, or residential.

1.3 Existing Facilities

The Town of Pembroke Park currently has an inventory of 49 lift stations. Of which 5 are abandoned or no longer exist, 2 are inactive, 15 are owned, operated and maintained privately, and 27 are publicly owned and operated.

The sewer collection is conveyed out of the Town by two separate systems. The East System collects all the sewage in the Town East of 48th Street and conveys this to the County System connection on Pembroke Road near lift station 19 in front of Coca Cola. The West system collects all sewage West of 48th Street and conveys the sewage the County System connection at the North East Corner of the Town Park on 48th Street. The sewage is pumped from the individual lift stations to the City of Hollywood where it is eventually treated at Hollywood's wastewater treatment facility.

Many private lift stations have been added to the east and west systems in the last two decades since the last Master Plan was drafted. The Seneca Commerce Center added one new station that is to be turned over to the Town upon certification. Private lift stations have been added at Westwind II on Coca Cola Drive, the Dollar General, the Polo Club, and the service station on Park Road and Pembroke Road.

1.4 Growth

Between 1996 and 2008 the Town of Pembroke Park experienced a dramatic increase in residential development. The Town is a leader in providing its fair share of affordable housing in Broward County. In 1996, the Town of Pembroke Park constituted less than 1% of Broward County's total developable land area and was home to approximately 11% of the total mobile or modular homes in

Broward County. The development of additional affordable housing continues to occur, primarily concentrated in the southwest portion of the Town.

Industrial growth between 1998 and present has continued to add additional large-scale Industrial buildings. There are currently two large industrial buildings in the Seneca Commerce Center that will bring the total to over 2.4 million square feet of industrial development. Very few parcels remain available for development and future development will occur on smaller parcels (mostly less than 2 acres) and redevelopment of older commercial and industrial properties including the superfund site that is proposed for demolition, cleanup and rebuilding in the next few years.

TABLE 1.1
TOWN OF PEMBROKE PARK DEVELOPMENT
2015 – 2022 (As of 11/22)

PROJECT	TOTAL SQUARE FEET
Seneca Commerce Center	**252,776**
Westwind II Plat	**108,000**
Lions Den Storage	**49,745**
Value Storage	**42,991**
Timely Property	**14,882**
4250 Hallandale Plaza	**9,442**

Commercial and industrial development continues with additional projects approved or under construction.

TABLE 1.2
TOWN OF PEMBROKE PARK
APPROVED DEVELOPMENT

PROJECT	TOTAL SQ. FT	STATUS
Seneca Commerce Center	**378,400**	**Under Construction**

As for future development within the Town of Pembroke Park, there are approximately seven (6) lots designated for future residential use remaining in the southwest portion of the Town. It is estimated that each lot could be developed with 24-50 dwelling units at the maximum allowable density of 16-25 dwelling units per acre. Currently, two of these lots contain single family homes while two are vacant. Therefore, the Town estimates that the four (4) remaining lots could be developed in the next five (5) years. This could add an additional 144 dwelling units.

Population estimates and projections are included in the Broward County Estimates. The Broward County Plan shows population decreasing slowly. This decrease is largely due to the fact that more of the mobile home tenants are seasonal and therefore no longer counted in the population. Many of the mobile home parks that were 50% year-round residents twenty years ago are now less than 10 percent.

TABLE 1.3
POPULATION ESTIMATES AND PROJECTIONS

YEAR	2010	2020	2022*	2025*
Residents	6102	6266	6115	6260

*Based upon estimates and projections from Broward County.

2.0 SCOPE OF SERVICES

2.1 Scope of Project

The purpose of this project is to evaluate the existing force-main network within the Town for existing conditions and proposed future conditions. We also propose evaluating the existing lift stations within the collection area. From this data the master plan will be created indicating to the Town proposed improvements required for the sanitary sewer system.

The scope of the project is to create an overall Sanitary Sewer System Master Plan to identify needed improvements to serve the existing customers and potential future customers. Through the modeling efforts of the study, we will be able to identify system improvements that will increase the efficiency of the existing pump stations and pipe network. The study will provide a list of proposed improvements with estimated probable costs of construction for both short term and long-term goals.

2.2 Lift Station Evaluation

The September 2001 Wastewater Collection Pumping System Improvements Preliminary Engineering Report regarding the condition of the existing Town lift stations within the sewer collection system was performed and many of the proposed improvements have been implemented. Between 2004 and 2008 the Town rehabilitated 22 lift stations. The 5 lift stations along SW 30th Street and the two Town lift stations on the west side of Town were not addressed due to funding limits. CAS conducted site visits at each Town lift station and identified

deficiencies of each station. A list of improvements, has been included in this report.

2.3 Determine Flows of Lift Station Collection Areas

We identified each lift station collection area and have provided the Town with a map showing these areas (see Figure-1). Information was gathered regarding the flow of each lift station collection area by verifying densities and lot counts and comparing these flows with the monthly water billing records.

This information was utilized in evaluating proposed improvements to the pipe network.

2.4 Determine Future System Flows

CAS evaluated the potential future flows by utilizing existing land uses, future land uses, and existing plots. We evaluated the potential for future sewer flows within the system in order to develop future flow characteristics. This data was utilized in the modeling of the system to determine proposed improvements to the pipe network.

2.5 System Modeling

A. CAS analyzed the forcemain network utilizing a computer flow model for both the existing and future conditions. The model identified the existing deficiencies within the pipe network.

B. In addition, we looked at the forcemain network model to determine potential future improvements to the pumping patterns within the force main network that would allow for more efficient pumping throughout the Town's network.

2.6 Update Sewer Atlas

The existing 2001 Sewer Atlas has been updated into an electronic CADD file. This will facilitate future upgrades with minimal effort.

2.7 Report Preparation

A Capital Improvement Plan with respect to the sanitary sewer system identifying all of the Town's needs has been provided with a list of proposed improvements with estimated probable project cost to be determined when project is added to the CIP and updated during funding application to ensure project's have the funds required to complete construction and design years after the funding application is drafted.

3.0 LIFT STATION INTRODUCTION

3.1 Introduction

This section of the report will provide a general review of the existing conditions of the lift stations and will categorize the present equipment, safety, and security needs of the existing lift stations. The primary purpose of this report is to provide a comprehensive analysis of the present conditions of the Town's entire lift station network. Please refer to Exhibits D, E, F, and G which show the lift station sewer atlas number, ownership, location, initial design capacity, pump data. In most cases, the initial design capacity is estimated due to the lack of actual flow data and the lack of available records for each lift station. The needs of the existing stations are outlined with an emphasis placed on the most urgent needs. Several of the lift stations require immediate attention to remedy critical safety, health, and maintenance concerns.

The Town sanitary sewer system is divided into two separate systems. The two systems are roughly divided East and West along 48th Ave. The West System pumps to the Broward County force main which discharges to the City of Hollywood Wastewater Treatment Facility through a metered tie-in located at the Northeast Corner of the Town park on 48th Ave. The West system includes the following lift stations and contributing gravity sewers: 14, 17, 37, 40, 42, 43.

The East System pumps to the City of Hollywood Force Main which conveys the flows to the City of Hollywood Wastewater Treatment Facility. The East system includes the following lift stations and contributing gravity sewers: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 18a, 18, 19, 22, 23, 34, 25, 26, 29, 30, 31, 32, 33, 34, 35, 36, 38, 39, 41, 44, 45, 46, 47, 48.

The initial gravity systems were not designed and/or built deep enough to accommodate additional development. Each residential development has a gravity pipe system that transports the sewage to a lift station that is usually located within the development. In addition to the general review of the existing conditions of the various lift stations, the review section will identify maintenance, safety and security problems with specific lift stations that should be addressed.

Although the majority of the Town has been developed, additional growth and future development has occurred. Most of the gravity sanitary sewer located throughout the Town is too shallow to tie into, most sewage from any new development will have to be pumped with a lift station into the existing forcemain. Many of the existing lift stations will have to be repaired or replaced in the near future. In order to reduce the number and types of maintenance problems encountered, it is recommended that the Town adopt a standard lift station specification to ensure specific pumps, materials, and control panels, and SCADA systems are utilized or constructed within the Town. If any of the existing lift stations need to be replaced in the future, they can be retrofitted to meet the requirements of the standard lift station specifications.

3.2 Lift Station Service Areas and Review of Existing Conditions

The lift stations located in Pembroke Park have been numbered for inclusion on the Sewer Atlas in chronological order. For the purposes of this report, they will be discussed here in the order that they enter the forcemain system and not by chronological or numerical order.

The majority of these systems are vitrified clay pipe, most of which is nearing the end or has surpassed the end of the service life. These systems are experiencing much Inflow and infiltration issues. These inflow and infiltration issues have been attributed to a substantial increase in flow to the lift stations throughout the Town causing increased operation, maintenance, and treatment costs. These increased flows are also simultaneously having an adverse effect on the Town's capacity for economic growth by limiting the available sewer capacity for future growth. The *Southern Regional Wastewater Treatment Plant July 2023 Large User Capacity Report* indicates that the Town was over capacity by nearly 160,698 Gallons/Day. The Town has a history of sewer camera work and lining of existing pipes to mitigate these Inflow and Infiltration issues. The most current lining project last occurred on Southwest 52nd Avenue in 2020. No pipe lining projects have been complete since the 2020 project while simultaneously the vitrified clay pipe is meeting or exceeding the product life limits without maintenance.

Photographs taken of the existing lift stations are included at the end of this section.

4.0 LIFT STATION EVALUATION AND COLLECTION WEST METER OUTFALL TO BROWARD COUNTY

4.1 Lift Station #14 (Public) (West System)

Lift Station #14 is located off the right-of-way of Hallandale Beach Boulevard in the Northeast corner of the Peninsula Health Care facility. In addition to the flow from the Peninsula Adult Living facility, Azure Villas, the Holly Ridge Apartments, Town Hall, Koinonia Worship Center, Swifty's Laundromat this lift station services the Dale Village subdivision, located on the North side of Hallandale Beach Blvd. The station receives flow from Lift Station # 38 on 55th Avenue and the private lift station serving the Marathon Gas Station on Hallandale Beach Blvd. The effluent runs through a 10" PVC forcemain through Ryan Park and The Preserve at Pembroke Park to the Meter and into the Broward County force main on SW 48th Avenue. The Broward County force main takes the sewerage to the City of Hollywood for treatment. This lift station is in fair condition. It has a pair of above ground 6-inch Gorman Rupp pumps, and an emergency generator.

This lift station is equipped with two 6" Gorman-Rupp pumps (model number T6A60B) that are powered by two 30 HP motors. The control panel has an emergency high-water alarm light and an automatic power transfer switch for the

on-site generator. There is also a water service for wash down and a security fence that encloses the lift station site.

The gravity system is currently having inflow and infiltration work completed and more is planned for the system. The panel is not in good condition, it has no alarm light, broken breaker for the generator. The panel along with the meter can and conduit is leaning over and should be replaced.

The pipes in the wet well are corroded and pumps do not have proper safety barriers including belt guards and safety fence. The station does not have backflow prevention in the piping and relies on in pump check valves to prevent sewage from flowing back into the station. This type of backflow is not reliable. The station, other than the generator, should be replaced with a new station with submersible pumps, a new panel and new piping to the adjacent 10-inch force main.

4.2 Lift Station #17 (Public) (West System)

Lift Station #17 is located off the right-of-way of SW 52nd Avenue in the Southeast corner of the Watkins Elementary School Tract. This lift station services all of the development located within Holly Tree Apartments, Pembroke Park Apartments, Forest Park Villas, Park Point Apartments, Park Apartments, Pembroke Gardens Apartments, Pembroke Park Townhomes, Pembroke Villas, Condo Real, La Estancia Apartments, Pembroke Place I and II, Plaza Assisted Living, and Glenwood Court Apartments. The effluent from lift station #17 feeds directly into an 8” HDPE forcemain, which ties into the 8" PVC forcemain halfway up SW 52nd Ave. It then connects to the 10-inch PVC force main in front of lift station #14. However, none of the sewerage flows pump into lift station #14.

lift station #17 is a wetwell/drywell type station that is equipped with two 6-inch Gorman-Rupp self-priming pumps. The pumps are powered by two 30 HP electric motors. Additionally, this lift station is equipped with an emergency high-water alarm light, a 100-amp emergency generator, and an emergency pump-out connection. The control panel is equipped with hand/auto/off switches for control to each pump, and the control panel is equipped with elapsed time meters (ETM), which keep track of motor running time. The Town is in the process of doing inflow and infiltration remediation in the system, reducing excess flows. The station piping is in poor condition and the dry pit along with the electrical system has been flooded and dried out. The station needs to be rebuilt including new control panel (raised to prevent flooding) and conversion to a wet well system to remove the hazards of the existing dry pit. The generator is in good condition and could be used with the replacement system.

4.3 Lift Station # 37 (Public) (West System)

Lift Station #37 is located on the right-of-way of SW 55th Avenue between 32nd Street and 33rd Street. In addition to the flow from the Lee Mills Subdivision the lift station also receives the flow from McTeer Park, the Montessori School and

the private lift station for the Pollo Club. The lift station was built by the Town in 2008 and is in good condition.

4.4 Lift Station #40 (Broward County School (Lake Forest Elementary) (West System)

Lift Station #40 is located on the north side of the Lake Forest Elementary School Parcel and services the school and the Police Athletic League Facilities. This lift station is owned and maintained by the Broward County School System and pumps through a force main along 48th Ave North to the Town-County tie-In location at the Northeast corner of the Town.

4.5 Lift Station #42 (Private) (West System)

Lift Station #42 is a private lift station that services the Marathon Service Station located at the Intersection 56th Avenue and Hallandale Beach Boulevard. The effluent from this station is designed to flow through a 4-inch DIP force main to the gravity system to lift station #14. Lift station and force main is private, and CAS had limited access to inspect. The lift station appears to be in a poor condition and may need maintenance.

4.6 Lift Station #43 (Private) (West System)

Lift station #43 is a private lift station located at the Pollo Club at the intersection of 56th Avenue and Hallandale Beach Boulevard. The lift station is a converted septic system and pumps through a force main to a gravity sewer manhole at the intersection of 32 Street and 56th Ave., which flows to lift station #37 on SW 55nd Street. This lift station is a private lift station and CAS had limited access. The lift station appears to be operational as per observation from the public right of way.

5.0 LIFT STATION EVALUATION AND COLLECTION EAST METER OUTFALL TO CITY OF HOLLYWOOD

5.1 Lift Station #1 (Public) (East System)

Lift Station #1 is located in the Park Lake Estates Trailer Park. This lift station re-pumps the flows from lift station #6 and the northern one-third population of Park Lake Estates Mobile Home Park, and Sanders Mobile Home Park. The effluent from this lift station discharges through 4-inch piping directly into the 8-inch CIP forcemain from lift station #7.

lift station #1 is equipped with two Sulzer submersible pumps that are powered by two 7.5-HP motors. The station is equipped with 4" check valves and 4" gate valves on the discharge side of the pumps. This lift station is equipped with an emergency high-water alarm light, emergency generator connection, and an emergency pump-out connection. The station was rebuilt in 2005 and is in good

condition.

5.2 Lift Stations #2 (Public) (East System)

Lift station #2 is located in the Park Lake Estates Trailer Park at the intersection of Marine Dr. and Marine Circle. Lift Station #2 services approximately one-third of the trailer park. The effluent from lift station #2 discharges through 4" piping directly into the gravity flow pipe system which flows directly into the wetwell of lift station #3.

Lift station #2 is equipped with two Sulzer Submersible pumps, which are powered by two 2.7 HP motors. This lift station is equipped with 4-inch check valves and 4-inch gate valves on the discharge side of the pumps. There is an emergency generator receptacle, emergency high-water alarm light or emergency pump-out connection provided for this lift station. The pump station is in good condition, with some corrosion of wet well and piping. The system shows signs of moderate inflow and infiltration with clear flow and 1 to 1.5 hours per day of operation while the neighborhood is seasonally largely unoccupied.

5.3 Lift Stations #3 (Public) (East System)

Lift station # 3 is located in Park Lake Estates at the intersection of Lake Shore Drive, East Lake Shore Drive and West Lake Shore drive. The effluent from lift station #3 discharges directly into a 6" ACP forcemain that runs East along West Lake Shore Drive and turns North and runs North along the Seaboard R.R. right-of-way.
Ift station #3 is equipped with two Sulzer submersible pumps, which are powered by two 7.5HP motors. This lift station is equipped with 4-inch check valves and 4-inch gate valves on the discharge side of the pumps. The control panel is equipped with an emergency generator receptacle, high-water alarm light, a main circuit breaker, and overloads. The station is in good condition but shows signs of moderately high infiltration with 7 plus hours of operation per day with occupancy less than 10%. The system needs to have an inflow and infiltration study and repairs.

5.4 Lift Station #4 (Public) (East System)

Lift Station #4 is located in the Pembroke Park Lakes Mobile Home Park at the intersection of West Lake Court and West Lake Drive. This lift station services the North half of the mobile home park, and the commercial tract S Block 37 Leke Forest Sec. 4 resub. The effluent from lift station #4 discharges through 4-inch piping directly into the 4-inch ACP forcemain that runs South along the West side of the park property. This forcemain eventually discharges into the gravity system of lift station #5.

Lift station #4 is equipped with two ABS submersible pumps that are powered by two 6.2 HP motors. The control is in good condition. The system should have its force main reworked to pump directly, through the force main, to the master lift

station. In the past, the system was altered when the force main was damaged prior to lift station #5.

5.5 Lift Station #5 (Public) (East System)

Lift Station #5 is located in the Pembroke Park Lakes Mobile Home Park on West Lake Drive nearly 2350 feet South of the intersection of West Lake Drive and West Lake Court. This lift station services the South half of the mobile home park and receives the flow from lift station #4. The effluent from lift station #5 discharges directly into the 4-inch ACP force main. The combined flows eventually discharge into manhole at lift station #3. The odor elimination system for this lift station is taped closed and corrosion is occurring in the station due to the sealed lid and inoperable gas removal system.

Lift station #5 is equipped with two 3-inch submersible ABS pumps with a 2.4-HP motor. The flow requirements for this lift station should be evaluated and this lift station should be increased in capacity and have the effluent from pump station #4 pumped directly into the force main and not repumped. The station is often surcharged. The gravity sewers contributing to this lift station are clay and may be experiencing issues with inflow and infiltration.

5.6 Lift Station #6 (Public) (East System)

Lift Station #6 is located in the La Siesta Mobile Home Park at Lat: 25°59'2.18"N & Long: 80°10'16.20"W. The effluent from this lift station discharges through 3-inch piping into a gravity flow pipe system that flows directly into the wetwell of lift station #1 for re-pumping.

Lift station #6 is equipped with two submersible, 2.4 HP ABS pumps. The lift station is equipped with an emergency high-water alarm, emergency generator connection, and an emergency pump-out connection. The lift station was rebuilt in 2008 and is in good condition. The gravity sewers contributing to this lift station are clay and may be experiencing issues with inflow and infiltration.

5.7 Lift Station #7 (Public) (East System)

Lift station #7 is located in the Lone Pine Mobile Home Park nearly 270 West of the intersection of 10th street and Green Acres Rd. This lift station services the Lone Pine Mobile Home Park and the effluent from lift station #7 discharges through 4-inch piping directly into the 6" ACP forcemain from lift station #3. It is at this location that the forcemain increases in size to an 8-inch diameter.

Lift station #7 is a submersible type lift station that is equipped with two 4-inch, 4.7 HP ABS pumps. The lift station is equipped with 4-inch check valves and 4-inch gate valves on the discharge side of the pumps, an emergency high-water alarm light, emergency generator receptacle, and emergency pump-out connection are provided for this lift station. The station was rebuilt in 2008 and is

in good condition. The majority of the gravity sewer contributing flow to this lift station are PVC and may not be experiencing issues with inflow and infiltration.

5.8 Lift Station #8 (Abandon, Removed, Does Not Exist) (East System)

5.9 Lift Station #9 (Private) (East System)

Lift station #9 is a privately owned lift station that is located in the Lake Villa Apartments located along Park Road near the Lake Villa Recreational Center. The effluent from this lift station discharges through 3-inch piping directly into the 4-inch PVC force main that runs South along Park Road to Lift station #34. This lift station is in good condition.

Lift station #9 is equipped with two 3-inch submersible pumps with 5-HP motors series SGV @ 3450 RPM, 115 volt, 3-phase 208/230V control panel. The controls are in good condition with lightning arrestors, alarm light, elapsed time meters, alternator, overloads and a stainless steel control panel.

5.10 Lift Station #10 (Private) (East System)

Lift station #10 is located off the right-of-way of SW 30th St. on the South side of Lot 27 in Block 40. This lift station services the development on Lots 26 -29 and the North 100 feet of tract R in Block 40. The effluent from this lift station discharges through 4-inch piping directly into the 6-inch ACP forcemain that runs along SW 30th St.

Lift station #10 was equipped with two 3-inch submersible pumps. This lift station is presently not equipped with an emergency high-water alarm light, an emergency generator receptacle or an emergency pump-out connection. These items need to be provided to identify and bypass a lift station failure. This lift station is secured with a fence. The station is private and no further information is available at this time.

The lift station should be replaced along with all the stations on SW 30th Street with a new gravity sewer system with fewer pumps, new gravity sewer system, and new force main to replace the current asbestos concrete one.

5.11 Lift Station #11 (Privately Owned) (East System)

Lift station #11 is located off the right-of-way of SW 30th St. on the South side of Lot 20 in Block 40. This lift station is a privately owned lift station that services the development on Lots 20 & 21. The effluent from this lift station discharges through 4-inch galvanized steel piping directly into the 6-inch ACP forcemain that runs along SW 30th St.

Lift station #11 is equipped with two 3-inch Hydromatic self-priming pumps that are powered by two 2-HP motors. This lift station is equipped with 3-inch gate valves on the discharge side of the pumps and a single 4-inch check valve on the

effluent line. The control panel is equipped with an elapsed time meter and an emergency high-water alarm light. The lift station is presently not equipped with an emergency pump-out connection or an emergency generator receptacle. These items are needed to provide a means to pump the sewage in the event of a lift station failure.

The lift station should be replaced along with all the stations on SW 30th Street with a new gravity sewer system with fewer pumps, new gravity sewer system, and new force main to replace the current asbestos cement one.

5.12 Lift Station #12 (Private) (East System)

This lift station is a small privately owned lift station along 30th St. which is utilized to collect sanitary sewer from the fuel service station located 128 feet West of the intersection of 37th Ave and 30th Street. This lift station is privately owned, and CAS was not able to access or inspect this lift station. An assumed pump was utilized for sewer modeling.

5.13 Lift Station #13 (Public) (East System)

Lift station #13 is located off the right-of-way of S.W. 30th St. on the South side of Lot 20 in Block 50. This lift station services the buildings located on Lots 17-28 of Block 50. The effluent from this lift station discharges through 6-inch DIP piping directly into the 6-inch ACP forcemain that runs along SW 30th Ave. This lift station should be replaced due to its poor condition.

Lift station #13 is a wetwell/drywell type lift station that is equipped with two 4-inch Gorman-Rupp self-priming pumps that are powered by two 10-HP motors. This lift station is presently not equipped with an emergency pump-out connection or an emergency generator receptacle. These items are needed to provide a means to pump the sewage in the event of a lift station failure.

The drywell to this lift station has standing water which needs to accumulate to about 6 inches before being pumped to 2 inches. This can be an electrical hazard and can also potentially cause damage to the motors. Additionally, pump # 2 is not operational and the station runs with single 110V float directly wired through the starter. The lift station should be replaced along with all the stations on SW 30th Street with a new gravity sewer system with fewer pumps, new gravity sewer system, and new force main to replace the current asbestos cement one.

5.14 Lift Station #15 (Public) (East System)

Lift station #15 is located off the right-of-way of SW 30th Street in the Southeast corner of Lot 13 in Block 50. This lift station services the Newman Building, (located on Lots 13 - 17 in Block 50) and the plaza (located on lots 9 – 13) and Block B. The effluent discharges through 4-inch DIP piping directly into the 6-inch ACP forcemain that runs along SW 30th St. This lift station should be

replaced due to its extremely poor electrical and mechanical condition.

Lift station #15 is equipped with one 3-inch submersible pump. The level control is by means of a single float switch, with no thermo protection. Lift station #15 is presently not equipped with an emergency high-water alarm light, an emergency pump-out connection nor an emergency generator receptacle. A fence provides security for the lift station site and is in poor condition. The wet well is a pipe sitting on a manhole and is in poor condition.

The lift station should be replaced along with all the stations on SW 30th Street with a new gravity sewer system with fewer pumps, new gravity sewer system, and new force main to replace the current asbestos cement one.

5.15 Lift Station #16 (Public) (East System)

Lift Station #16 is located at the corner of Prairie Ave. and Alabama St. This lift station services the commercial development on the East and West side of Prairie Avenue at this location along with the RV section of Lake Trinity. The effluent from this lift station discharges through 4-inch piping directly into the 6-inch forcemain that runs west along Alabama St. to Park Road where it enters the 8-inch CIP forcemain that runs along Park Road.

Lift station #16 is equipped with two 4-inch ABS/Sulzer pumps that are powered by two 10.1-HP motors. The lift station is equipped with an emergency generator receptacle, an emergency high-water alarm light and an emergency pump-out connection. The station was rehabilitated in 2008 and is in good condition.

5.16 Lift Station #18 (Public) (East System)

Lift Station #18 is located in Holiday RV Park. The effluent from this lift station discharges through 3-inch piping directly into the 8" CIP forcemain from lift station #7.

Lift station #18 is equipped with two submersible ABS pumps of 1.3 horsepower. The station is equipped with an emergency high-water alarm light, an emergency generator receptacle or an emergency pump-out connection. The station was rehabbed in 2005 and is in good condition. This station services the rear of Holiday Mobile Home Park and RV park. The majority of the gravity sewer contributing flow to this lift station are clay pipes and may be experiencing issues with inflow and infiltration.

5.17 Lift Station #18A (Public) (East System)

Lift Station #18 and # 18A are located in the Holiday RV Park. The effluent from these lift stations discharges through 3-inch piping directly into the 8-inch CIP forcemain from lift station #3.

Lift Station #18 A is equipped with two submersible Hydromatic pumps of 3

horsepower. The station is equipped with an emergency high-water alarm light, an emergency generator receptacle and an emergency pump out connection. The station was rehabbed in 2005 and is in good condition. This station services the front section of Holiday Mobile Home Park. The majority of the gravity sewer contributing flow to this lift station are PVC and may not be experiencing issues with inflow and infiltration.

5.18 Lift Station #19 (Public) (East System)

Lift Station #19 is located on Pembroke Road in front of the Coca Cola Plant and services the Coca Cola Plant. The effluent from this lift station discharges directly into the 8-inch CIP force main that runs along Pembroke Road. The effluent then passes through a flow meter that belongs to the City of Hollywood. The force main runs West along Pembroke Road and then North along North Park Road where they eventually discharge into the wet well of lift station #15 that is owned by the City of Hollywood.

Lift station #19 is equipped with two Sulzer/ABS submersible pumps that are powered by two 24.8-HP motors. This station is equipped with 8-inch gate valves and 8-inch check valves on the discharge side of the pumps and with 8-inch gate valves on the suction side of the pumps. The station is equipped with an emergency high-water alarm light, an emergency generator receptacle and an emergency pump-out connection. The station piping, pumps and concrete is deteriorated by the corrosive nature of the wastewater from the Coca Cola Bottling Plant. The system has insufficient storage and has a history of overflows.

It is recommended that the lift station be rebuilt with a larger lined wet well and corrosion resistant (stainless steel) pipes and pumps. The system should be equipped with telemetry to inform of issues to prevent overflows. The system is already equipped with an emergency generator.

5.19 Lift Station #20 (Abandon, Removed, Does Not Exist) (East System)

5.20 Lift Station #21 (Abandon, Removed, Does Not Exist) (East System)

5.21 Lift Station #22 (Public) (East System)

Lift station #22 is located in the Lakeside Park Estates Mobile Home/RV Park along Trinity Lane. This lift station re-pumps the flow from lift station #26 and gravity flow from the North part of Lakeside Park Estates Mobile Home/RV Park. The effluent from this station discharges through 4-inch piping directly into the 4-inch PVC forcemain that runs East and North to Pembroke Road where it enters the 8-inch CIP forcemain that runs along Pembroke Road towards the flow meter to Hollywood.

Lift station #22 is equipped with two Sulzer submersible pumps that are powered by two 10.1-HP motors. This lift station is equipped with 4-inch gate valves and

4-inch check valves on the discharge side of the pumps. The lift station is equipped with an emergency high-water alarm light, an emergency generator receptacle, and an emergency pump-out connection. The station was rehabilitated in 2008 and had pump replacements in 2020 and 2021 and is in good condition. The majority of the gravity sewer contributing flow to this lift station are clay pipes and may be experiencing issues with inflow and infiltration. Most of the mobile homes and permitted RVs are removed from the Mobile Home Park. Much of the system is in poor condition and plugs should be put in place at removed Mobile Home locations to reduce inflow and infiltration.

5.22 Lift Station #23 (Public) (East System)

Lift station #23 is located on the East side of the Seaboard R.R. right-of-way, behind the building located at 2930 SW 30th Avenue. This lift station services the flows from this street, 2910 – 3040 SW 30th Avenue and 3000 W. Hallandale Beach Blvd. The effluent from this lift station discharges through a 4-inch ACP force main that increases to 6-inch ACP. This force main enters the 6-inch ACP force main from lift station #3.

Lift station #23 is equipped with two ABS pumps that are powered by a 4.7-HP motor. The station is equipped with a high-water alarm, emergency generator receptacle and an emergency pump-out connection. There is a security fence enclosure. During heavy rains the station becomes submerged, but not up to the electrical box. The top slab and manhole should be raised to above flood grade. The majority of the gravity sewer contributing flow to this lift station are clay pipes and may be experiencing issues with inflow and infiltration.

5.23 Lift Stations #24 (Public) (East System)

This lift station is located in the Green Acres Mobile Home Park. These lift stations service the Green Acres Mobile Home Park. The effluent from this lift station discharges through 3-inch PVC piping directly into the 6-inch ACP force main that begin at lift station #3.

This lift station is submersible-type station with two 3-inch submersible pumps, 2-HP ABS pumps. Both lift stations are equipped with emergency high-water alarm lights and 3-inch emergency pump-out connections, and an emergency generator receptacle. The station was rebuilt in 2008 and is in good condition. The majority of the gravity sewer contributing flow to this lift station are clay pipes and may be experiencing issues with inflow and infiltration.

5.24 Lift Stations #25 (Public) (East System)

This lift station is located in the Green Acres Mobile Home Park. This lift station services the Green Acres Mobile Home Park. The effluent from this station discharges through 3-inch PVC piping directly into the 6-inch ACP forcemain that begins at lift station #3.

Both lift stations are submersible-type stations with two 3-inch submersible, 2-HP ABS pumps. Both lift stations are equipped with emergency high-water alarm lights and 3-inch emergency pump-out connections, and an emergency generator receptacle. The stations were rebuilt in 2008 and are in good condition. The majority of the gravity sewer inflow and infiltration.

5.25 Lift Station #26 (Public) (East System)

Lift station #26 is located in the Lakeside Park Estates Mobile Home/RV Park. This lift station services the residential development in the Southeast corner of the trailer park. The lift station effluent discharges through 3-inch piping directly into the gravity sanitary pipe system that discharges into the wetwell of lift station #22.

Lift station #26 is equipped with two ABS/Sulzer submersible 2.4 HP pumps. The lift station is equipped with an emergency high-water alarm light, an emergency generator receptacle, and an emergency pump-out connection. The lift station was rehabilitated in 2008 and had one pump replaced in 2021 and is in good working order. The property owner is in the process of evicting all tenants and the future use of the property is yet to be determined.

5.26 Lift Station #27 (Abandon, Removed, Does Not Exist) (East System)

5.27 Lift Station #28 (Abandon, Removed, Does Not Exist) (East System)

5.28 Lift Stations #29 (Public) (East System)

Lift station #29 is located in Bamboo Paradise Mobile Home Park. The lift station services all of Bamboo Paradise Mobile Home Park. The effluent from this lift station is pumped through a forcemain into the elevated manhole located on SW 31st Place where it then gravity flows through piping that eventually discharges into the wetwell of lift station #34. The lift station is equipped with two submersible ABS/Sulzer pumps with 2.4 HP motors. The station was rehabbed in 2008 and is in good condition. Much of this system has been replaced with PVC pipe and may not be experiencing many inflow and infiltration issues.

5.29 Lift Stations #30 (Public) (East System)

Lift station #30 is located in the Bamboo Lakes Mobile Home Park. This lift station services Bamboo Lakes Mobile Home Park. The effluent from this lift stations is pumped through a force main into the elevated manhole located on SW 31st Place where it then gravity flows through piping that eventually discharges into the wet well of lift station #34. This lift station is equipped with two ABS submersible pumps and 2.4 HP motors. The station was rebuilt in 2008 and is in good condition. Much of the gravity sewer in this location is clay pipe and may be experiencing inflow and infiltration issues.

5.30 Lift Station #31 (Public) (East System)

Lift station #31 is located on SW 31st Avenue. This lift station services the commercial area along SW 31st Ave. The effluent from this lift station discharges through 4-inch piping directly into the 4-inch PVC force main that runs South along SW 31st Ave. and then West along Carolina St. to Park Road where it ties into the 8-inch CIP force main that runs along Park Road.

Lift station #31 is equipped with two ABS submersible pumps that are powered by two 10-HP motors. This lift station is equipped with an emergency high-water alarm light, an emergency generator receptacle, and an emergency pump-out connection. The station was rehabilitated in 2008 and is in good condition. Much of the gravity sewer in this location is PVC and may not be experiencing issues with inflow and infiltration.

5.31 Lift Station #32 (Public) (East System)

Lift station #32 is in the Curci commercial development. The effluent from this lift station discharges through 4-inch piping directly into the 4-inch PVC force main that runs East along SW 25th St. to Park Road where it connects to the existing 8-inch force main. Lift station #32 is equipped with two submersible 4-inch ABS pumps. The pumps are 4.7 HP. The station is equipped with an emergency high-water alarm light, an emergency generator receptacle or an emergency pump-out connection. The station was rehabbed in 2008 and is in good condition. Much of the gravity sewer in this location is PVC and may not be experiencing issues with inflow and infiltration.

5.32 Lift Station #33 (Private) (East System)

Lift station #33 is located off the right-of-way of SW 30th St. on the South side of Lot 2 in Block 40. This lift station services the Orion convenience store located on Lots 1 and 2 in Block 40. This lift station is privately owned. The effluent from this lift station discharges through 4-inch PVC piping directly into the 6-inch ACP forcemain that runs along SW 30th St.

The lift station is a submersible type of lift station and is equipped with an emergency high-water alarm light, an emergency generator receptacle and an emergency pump-out connection. A locked fence secures the lift station site and the wetwell hatch has been provided with a locking hasp, which helps eliminate access by unauthorized individuals. No further information was available on this lift station at the time of this report.

5.33 Lift Station #34 (Public) (East System)

Lift station #34 is located on Park Road at the easement site at Lakeside Warehouse Park. This lift station is equipped with three ABS/Sulzer pumps, powered by three 60 HP motors. The station is equipped with an emergency

high-water alarm light and an emergency pump out connection in the event of pump failures. This station is also equipped with a diesel-powered emergency generator for use as a back up power supply. The drywell is equipped with a ventilation blower and a sump pump to prevent damage to electrical equipment from moisture. Additionally, the pumps are provided with gate valves on the discharge side of the pumps and check valves on the discharge side of the pumps. The effluent from this station discharges directly into the 8-inch CIP forcemain that runs North along Park Road where it splits into a 12-inch and 8-inch parallel forcemains, which then extends West along Pembroke Road. As discussed previously, the effluent proceeds to Hollywood where it is treated at the Hollywood Sewage Treatment Plant. The generator is in poor condition and has been unreliable. It should be replaced.

The lift station 34 repumps many of the southeast lift station flows to the county main located near the lift station. Lift stations that contribute to lift station 34 flows are: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 15, 18a, 18, 23, 24, 25, 29, 30, 32, 33, 35, 44, 45, 46, 47, 48 to the City of Hollywood where it is eventually treated Much of the gravity sewers attributed to this lift station are clay pipe and may be experiencing issues with inflow and infiltration.

5.34 Lift Station # 35 (Public) (East System)

Lift station #35 services the Pembroke Commerce Center and collects flows from public lift station #38 and private lift station #39. The lift station consists of a pair of 10 HP EMU submersible pumps. Wastewater is pumped through a 4-inch poly force main to the 12-inch force main adjacent to the meter at Coca Cola.

The station is generally in good condition except that water is standing in the bottom of the control cabinet due to holes in rear of the cabinet and the meter can allowing water to enter. This is causing some corrosion in the cabinet and needs repair. This lift station is gravity collection system that is PVC and may not be experiencing issues with the inflow and infiltration.

5.35 Station #36 (Private) (East System)

This is a new submersible lift station installed by Seneca Development to service their industrial site. The lift station consists of a pair of submersible Fairbanks-Morse pumps, rated at 320 GPM at 144' TDH with 30 HP motors. This lift station is connected to a 6-inch PVC forcemain that extends approximately 1350 feet and enter the 8-inch forcemain on the North side of Hallandale Beach Blvd. Little else is known about this lift station since it was not visited as part of this study. Flow from private TV Station lift station #48 is pumped into lift station #36 gravity sewer. This lift station is gravity collection system that is PVC and may not be experiencing issues with the inflow and infiltration.

5.36 Lift Station #38 (To be Public Upon Completion of Construction) (East System)

Lift station # 38 is located within the Seneca Commerce Center and was built by

the developer and scheduled to be deeded to the Town upon completion. The station is still under the operation of the developer and is badly overgrown. The condition of the station and the drawings and specifications have not been available for inspection. Data was later provided, and planned pumps were incorporated into the model.

5.37 Lift Station #39 (Private) (East System)

Lift station #39 is located at Southwest 20th Street and 37th Ave. This lift station services the commercial development on the South side of 20th Street. The effluent from this lift station runs through 2-inch piping directly into the terminal manhole at lift station #35. This lift station is a private lift station and CAS had limited access. The lift station appears to be operational and in good condition as per observation form the public Right of Way.

5.38 Lift Station #41 (Private)

Lift station #41 is a private lift station owned by the service station located at 3250 Pembroke Road. The effluent from this station is pumped directly, via 1.25-inch force main into the 8-inch force main directly across the street. The station only services the service station. This lift station is a private lift station and CAS has limited access. The lift station appears to be operational and in good condition as per observation form the public Right of Way.

5.39 Lift Station #44 (Private) (East System)

Lift station #44 is a private lift station located at the Dollar General located at SW 48th Avenue and Hallandale Beach Boulevard. The lift station pumps the effluent, through a 2-inch force main to the 6 inch AC force main located on SW 48th Avenue. This lift station is a private lift station and CAS had limited access. The lift station appears to be operational and in good condition as per observation from the public Right of Way

5.40 Lift Station #45 (Private) (East System)

Lift station #45 is a private lift station located at 3744 Hallandale Beach Blvd. This is a lift station which collects sewer for Two Quad Plex Apartment Buildings.. The lift station appears to be operational and in good condition as per observation from the public Right of Way. The Station converted the septic tank to a wet well.

5.41 Lift Station #46 (Private Constructed to service club house) (East System)

Lift Station #46 is a private lift station located at the Holiday Mobile Home Park Club House to service the Club House. The lift station appears to be operational and in good condition as per observation form the public Right of Way.

5.42 Lift Station #47 (Public) (East System)

Lift station #47 is a public lift station located at the town owned Bamboo Recreational Center on SW 31st Place. The lift station appears to be operational and in good condition as per observation. This is a very small lift station which only services one customer and the Rec-Center.

5.43 Lift Station #48 (Private) (East System)

Lift station #48 is a private lift station located at Channel 10 TV Station on 28th Street. The lift station pumps the effluent, through a force main to the gravity system of lift station #36. This lift station is a private lift station and CAS had limited access. The lift station appears to be operational and in good condition as per observation form the public Right of Way. Pump sizes in model were assumed due to lack of as-built plans and pump data.

5.44 Summary

Additionally, this report has provided a comprehensive analysis of the existing lift stations. Several of the existing lift stations have safety and electrical hazards that need to be corrected immediately, and it is recommended that the Town have its electrical and building inspectors check each lift station for violations.

Several of the lift stations require immediate rehabilitation or replacement. These are primarily the lift stations not completed in the 2005-2008 lift station rehabilitation program. The stations along SW 30th Street and 14, 17, and 19 need immediate attention. Along with these stations, many of the private stations feeding the Town are inoperable or in poor condition.

6.0 SYSTEM FLOWS AND MODELING

6.1 Constructing the Hydraulic Models

The computer models used for the hydraulic analyses of the wastewater distribution systems were constructed using Sewer CAD version 10.3.4.53. The Sewer CAD software allows a graphical version of the piping system to be constructed, including all lift station pumps and appurtenances. These models can be used to perform long-range planning and to test different pipe sizes and demand configurations.

Sewer CAD was utilized in conjunction with AutoCAD 2020 to map and model all components of the sanitary sewer system. Much of the gravity sewer data was collected from archived as-built and construction plans from the Town. The remaining potions of the model were created via field gathered information or general engineering interpolation. Many of the gravity sewer inverts, pipe sizes and material in the Town have no archived as-built data. CAS could, in most cases, with direction of the Town, interpolate such missing data or extrapolate

missing data from known data upstream and downstream. In some cases, site visits or visual confirmations were used to identify missing data. Data was also obtained from firsthand accounts from current and former Town of Pembroke Park sanitary sewer employees. This invert elevation data should only be used for flow model purposes and survey data should be obtained for design and construction projects. Ground or rim elevation were gathered from public lidar sources such as: www.Labins.org or www.noaa.gov. Detailed information at lift station were gathered by CAS Survey Crews.

Each pipe, manhole, wet well and junction node was modeled. Each pipe is associated with title, length, diameter, roughness coefficient or C-factor, minor loss coefficient, and the status of the pipe (either open or closed).

A junction node is defined as a location where two or more pipes meet or if a pipe diameter or material change occurs or at a component such as a valve or a pump, this point is a junction node. The pressure in the system can be calculated at any junction node where the elevation is specified. For each junction node a title, elevation, and flow can be specified. The atlas of the Pembroke Park distribution system is shown in the Appendix.

The gravity sewer system was modeled as well and design model. Invert elevations have been applied to all manholes in the system. This data can be found in the Town atlas or in the manhole report produced by the Model. The gravity sewer pipes have been modeled and mapped. The data for this pipe can be found in the gravity sewer model pipe report with properties such as material, slope, flow, % capacity, invert, and diameter can be found in the report or atlas.

The public lift stations throughout Town were inspected. In locations that were accessible the lift station pump models, pump make, pump horsepower, wetwell size, controls and inverts were verified. Most of the private lift stations in the Town were not accessible and much of the data from these lift stations was taken from design or as-built plans if available. If no data was available, data from a similar lift station was applied which shared similar physical and design property parameters.

Sanitary sewer Town design flows were used for much of the Town derived from Chapter 13.5 of the Town municipal code. These calculated local sewer loads were applied to the closest sewer manhole or wet well. Nodal demands were determined using the billing records for the commercial and residential accounts and counting the lots and commercial properties from the aerial photographs of the Town.

According to reports and information contained within the Town's Code of Ordinances the following wastewater flow projections were used to determine the Lift Station service area's flow rates.

Single family residence	358 gallons per day per unit
Mobile Home	108 gallons per day per unit
Multi-family residence	270 gallons per day per unit
Commercial/Industrial	Based on Land development code and use

The actual design flow rates for each lift station were designed with a peak factor as recommended in the Ten-States Standards and the Broward County Lift Station Design Criteria. Ten States Standards is a board of state public health and environmental standards utilized by Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, Ohio, Ontario, Pennsylvania, and Wisconsin.

The following peak factors were utilized:

Flow Range Average Daily Flow (ADF)	Peak Factor
0.01 to 0.05 MGD	3.5
0.05 to 0.25 MGD	3.0
0.25 to 2.00 MGD	2.5

The Town supplied data from individual billing records, which were also used to determine the lift station flow rates.

The pipe materials were determined from maps and data received from the Town. There were several types of pipe in the system including ductile iron, polyvinyl chloride (PVC), asbestos cement, cast iron, and galvanized steel. The initial roughness coefficients, C-factors, were assigned to the existing pipes based on the type of material and their age.

Pipe	C-factor
Ductile Iron	120
PVC	120
Asbestos Cement	100
Cast Iron	115
Galvanized Steel	95

6.2 Water Use and Billing Data Supplied by the Town of Pembroke Park

The Town was not able to obtain residential and commercial billing water meter flow records from the County. These records contain the monthly billings of the residential accounts and the monthly billings of the commercial/multi-family accounts. The accounts contained the average water consumption (by address) and the Town would be able to compare the water flow data to the sewer model and sewer meter reading to identify areas experiencing inflow and infiltration issues.

6.3 Determination of Lift Station Service Areas and Wastewater Demands from Utility Data

Sanitary sewer flow loads were determined utilizing the Chapter 13.5 Land Development Pembroke Park Town code design flows. The loads were applied to nealy all the parcels/customers in Town. Coca Cola flows do not have a standard design flow so this flow could only be determined by obtaining information from the customer or by metering lift station #19 flows.

Next, the wastewater atlas, aerial photographs, and County Property Appraiser data were carefully studied and used to determine unit flow type and quantities for each lift station service. Sewer flow unit loads were applied for each manhole in the gravity system or wetwell based on the number of units or facility type. A peaking factor for each unit load in each lift station basin was determined utilizing the Broward County Standards for wastewater system wetwell sizing requirements. This factor was multiplied by the unit load gallons per day (gpd) and the resulting lift station system design sewer flows. This process was continued throughout the Town for every lift station. These provide a view as to how the wastewater demands are currently placed and distributed throughout the Town. These methods also establish the lift station service areas. The wastewater usage demand data for both the commercial/multi-family and residential units.

The wastewater lift station pump curves were analyzed, and their design flow rates were compared to the service area flow rates previously established. The existing lift stations, in all but a few instances, were found to be adequately sized for the service area required flow rates.

6.4 Models Of The Existing Wastewater Lift Stations and Force Main

Please note that all of the modeling data and reports generated in this study are contained in ***Exhibit D, E, F****.*

After establishing the unit loads and flow for each customer as described in section 6.3 the loads were applied to the nearest system manhole. The loads were then utilized to generate flows in the gravity sewer system. A capacity analysis was assessed for every gravity sewer pipe in the system for current conditions. This assessment was then utilized to identify gravity sewer pipes which are near or at max capacity.

These design flows are also applied to the wet well and pumps. The model was utilized to identify lift station flows and deficiencies.

After establishing the forcemain service areas and determining the existing pipe sizes and materials, the existing lift stations had to be investigated to determine their pump specifications. The individual pump curves were then entered into the model and the model was able to run based on existing conditions of the lift

stations that connect into the Town's East and West systems.

A base model was established where all of the lift stations were simulated as running simultaneously. All lift Town public lift stations were able to operate simultaneously simulating a worst case scenario similar to a wet weather event during peak hour in which all lift stations could be operating at the same time. No pumps were overloaded, and all were able to maintain a reduced operational flow to overcome high head demand from the excessive flows in the force main system.

In conclusion, these models were simulations of the existing forcemain system in the Town of Pembroke Park with their original pump curve data or in some cases new pump curves. The hydraulic model utilizes the pump curve to simulate pump performance. The age and condition of the pump is not taken into account. Therefore, these existing computer simulations may not reflect the actual pump performance of the existing pumps. Without doing actual field tests this is the next best way to analyze the existing forcemain system.

These simulations give little evidence that the smaller private lift stations are adequately powered with enough horsepower or discharge head to run simultaneously with some of the newer larger pump stations. A couple of the small private lift stations were assumed to be operating, but CAS had no data to verify pump models, size, head or flow. These lift stations would have minimal impact on the system. Lift Station 14, 17 and 19 have components which are at capacity and the Town is currently in design on all 3 of these lift stations to resolve any deficiencies.

6.5 Hydraulic Models of the Future Lift Stations and Forcemain System

Areas of growth in the Town have been identified and outlined below. The possible impacts for growth of code designation of Medium High (MH) of 25 units per acre and a code variance allowing 50 units per acre are outlined below for future growth scenarios. The respective sewer lift stations and sewer systems have been projected for areas of underdeveloped land in following lift station collection areas:

Future Growth Areas with Medium High (MH) development of 25 units per acre:

- Lift Station #14 future flows due to development growth:
    - Parcel 514230390010 at the intersection of Hallandale Beach Boulevard and 52nd Avenue. This 7.09 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) applied at 25 units per Acre to allow 175 units at 270 gallons per day. This load is applied at manhole M14C4. The sewer load due to this development would add an addition of 47,250 gallons per day to the lift station #14 basin.

- The projected model future peak hour design flow for lift station 14 in the 25 unit per acre scenario applied to the parcel listed above would result in wet well flows of nearly 752 gallons per minute.

- Lift Station #17 future flows due to development growth:

  - Parcel 514230130010 at the intersection of County Line Road and SW 56th Ave. This 1.63-acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) at 25 units per acre; 40 units at 270 gallons per day. The load is applied at Manhole M17F4. The sewer load due to this development would add an addition of 10,800 gallons per day to the lift station #17 basin.

  - Parcel 514230130130 at the intersection of County Line Road and SW 52nd Avenue. This 2.034 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) at 25 units per acre. 50 units at 270 gallons per day. This load was applied at Manhole M17A12. The sewer load due to this development would add an addition of 13,500 gallons per day to the lift station #17 basin.

  - Parcel 514230130162 at 327 feet West of the intersection of Southwest 48th Avenue. This 2.078-acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) at 25 units per acre. 51 units at 270 gallons per day. This load was applied to Manhole M17B6. The sewer load due to this development would add an addition of 14,026 gallons per day to the lift station #17 basin.

  - The projected model future peak hour design flow for lift station #17 in the 25 unit per acre scenario applied to the parcel listed above would result in wetwell flows of nearly 884 Gallons Per Minute.

- Lift Station #22 future flows due to development growth:
  - Parcel 514220000370 located on the south side of West Pembroke Road 680 feet west of the intersection of West Pembroke Road and South Park Road. This 10.6-acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 25 units per acre. 265 units at 270 gallons per day. This load was applied to Manhole M22B1. The sewer load due to this development would add an addition of 71,550 gallons per day to the lift station #22 basin.

  - Parcel 514220000330 located on the south side of West Pembroke Road 321 feet west of the intersection of West Pembroke Road and

South Park Road. This 17.5-acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 25 units per acre. 437.5 units at 270 gallons per day. This load is applied at Manhole M22A5. The sewer load due to this development would add an addition of 118,125 gallons per day to the lift station #22 basin.

- The projected model future peak hour design flow for Lift Station 22 in the 25 unit per acre scenario applied to the parcel listed above would result in wet well flows of nearly 389 Gallons Per Minute.

Future Growth Areas with Medium High (MH) development of 50 units per acre:

- Lift Station #14 future flows due to development growth of 50 Units Per Acre:

  - Parcel 514230390010 at the intersection of Hallandale Beach Boulevard and 52nd Avenue. This 7.09 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per Acre to allow 350 units at 270 gallons per day. This load was applied to Manhole M14C4. The sewer load due to this development would add an addition of 94,500 gallons per day to the lift station 14 basin.

  - The projected model future peak hour design flow for Lift Station 14 in the 50 unit per acre scenario applied to the parcel listed above would result in wetwell flows of nearly 877Gallons Per Minute.

- Lift Station #17 future flows due to development growth of 50 Units per Acre:

  - Parcel 514230130010 at the intersection of County Line Road and SW 56th AVE. This 1.63 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per acre. 81 units at 270 gallons per day. This load is applied at manhole M17F4. The sewer load due to this development would add an addition of 22,005 gallons per day to the lift station #17 basin.

  - Parcel 514230130130 at the intersection of County Line Road and SW 52nd Avenue. This 2.034 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per acre. 101 units at 270 gallons per day. This load is applied at manhole M17A12. The sewer load due to this development would add an

addition of 27,459 gallons per day to the lift station #17 basin.

- Parcel 514230130162 at 327 feet West of the intersection of Southwest 48th Avenue. This 2.078 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per acre. 103 units at 270 gallons per day. This load is applied at M17B6. The sewer load due to this development would add an addition of 28,0253 gallons per day to the lift station #17 basin.

- The projected model future peak hour design flow for Lift Station 17 in the 50 unit per acre scenario applied to the parcels listed above would result in wetwell flows of nearly 985 Gallons Per Minute.

- Lift Station #22 future flows due to development growth of 50 units per acre:
  - Parcel 514220000370 located on the south side of West Pembroke Road 680 feet west of the intersection of West Pembroke Road and South Park Road. This 10.6 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per acre. 530 units at 270 gallons per day. This load is applied at manhole M22B1. The sewer load due to this development would add an addition of 143,100 gallons per day to the lift station #22 basin.

  - Parcel 514220000330 located on the south side of West Pembroke Road 321 feet west of the intersection of West Pembroke Road and South Park Road. This 17.5 acre parcel is proposed in this master plan for full future build out classified in Land Use Category of Medium High (MH) with a variance applied at 50 units per acre. 875 units at 270 gallons per day. This load was applied at manhole M22A5. The sewer load due to this development would add an addition of 236,250 gallons per day to the lift station #22 basin.

  - The projected model future peak hour design flow for lift station #22 in the 50 unit per acre scenario applied to the parcels listed above would result in wetwell flows of nearly 587 Gallons Per Minute.

- Abandon the 6-inch forcemain along S.W. 30th Street and remove Lift Stations #13, 14, 33, 12, 11 and 10. The existing lots will be tied into the proposed gravity collection system on S.W. 30th Street. Remaining lift stations 15 and 12 on SW 30th Street will collect proposed gravity sewer.

- Increase the existing 8-inch forcemain on Park Road to 12-inch diameter. This will start from Hallandale Beach Boulevard and run North to Carolina Street, where it will connect to the existing 12-inch forcemain.

Three hydraulic model scenarios have been created:

- The Base Model which is a depiction of the existing conditions: This model and the result from it utilize existing conditions and provide insight into the immediate needs and issues of the Town.
- The 25 Unit per Acre Medium High Density Future Growth Scenarios for all undeveloped or underdeveloped parcels listed herein.
- The 50 Unit per Acre Variance High Density Future Growth Scenarios for underdeveloped parcels listed herein.

Please refer to the individual model results that explain in detail each pump flow rate and discharge head pressure. Pump curves were identified for each model lift station pump found in the field. CAS did not have access to some small private lift stations, so a standard small pump was assumed for these situations. The model provides individual model scenario Junction Reports, Force Main Reports, Pump Reports, and Gravity Sewer Reports. The individual model maps are color coded by pipe size with flow arrows indicating the direction of flow.

6.6 Hydraulic Models Of The Analysis Of Current And Future Gravity Sewers Systems

The Town of Pembroke park has a vast gravity sewer system much of which is shallow and small diameter. We have outlined below the lift station basins existing and future states based on the model scenarios cited herein in section 4.5 and inflow and infiltration issues which may be adversely impacting the operation of lift station throughout Town. Much of the Town gravity sewers utilize vitrified clay pipe which is old and may be reaching the end of it material lift span. These clay pipe areas have been experiencing increase in lift station flow from ground water inflow and infiltration. The two main issues regarding the Town gravity sewers are (I and I) Inflow and Infiltration, and gravity capacity. These issues have been outlined below:

- (I and I) Inflow and Infiltration:
  I and I is a term used for excess water that flows into sanitary sewer pipes from groundwater and stormwater. Infiltration refers to groundwater that infiltrates or leaks into pipes and inflow refers to storm or surface water that enters pipes from sources other than infiltration. Infiltration seeps into sewer pipes through holes, cracks, joint failures, and faulty sewer pipe connections. Inflow flows into sewers via roof drain downspouts, foundation drains, storm drain cross-connections, and through holes in maintenance hole covers. The ground water tables are high and in many locations above the gravity sewer pipes. These locations which the gravity sewers are below the water table and where the material is clay are highly susceptible to Inflow and Infiltration issues.

  CAS has utilized the Broward County Future Conditions Average Wet Season Groundwater maps that which are also used to aid in the design of infrastructure to be resilient with anticipated climate change effects. The Future Conditions Average Wet Season Groundwater Elevation Map

provides the antecedent conditions for new or major modifications to surface water permitted projects. The map utilized the County's hydrologic models with anticipated future sea level rise (USACE NRC Curve 3) and future precipitation patterns (COAPS CCSM) and averages the groundwater elevations over the May-October periods during the years of 2060-2069.

To identify gravity sewers in the Town that may have infiltration issues due to ground water the future ground water elevation have been cited from the Broward County GIS and noted in each Atlas Page. Elevations are NAVD88 datum. Any pipes below these elevations have been identified via the Atlas to be susceptible to ground water infiltration.

- Gravity Sewer Capacity:
  Gravity sewer analysis for the entire sewer system has been conducted for every gravity sewer segment in the Town. Many gravity sewer systems have been identified to be currently operating at or above capacity in the existing base model scenario. These pipes operate at or above capacity in the exist base scenario: O2L34SA9, O1L14SA2, O2L34SA3, O2L34SA6, O1L14SC1, O1L14SC2, O1L14SC3, O2L34SA8, O1L14SC4, O1L17SA10, O1L14SC5, O2L3SA1, O1L17SA9, O2L35SA1. The future growth scenario medium density with 25 units per acre build-out cited herein 4.5 indicates slightly more gravity sewer capacity issues. These pipes operate at or above capacity in the 25 unit build out scenario: O2L34SA9, O1L14SA2, O2L34SA3, O2L34SA6, O1L14SC1, O1L14SC2, O1L14SC3, O2L34SA8, O1L14SC4, O1L17SA10, O1L14SC5, O1L17SA9, O2L35SA1, O1L17SA11, O1L14SC5, O2L3SA1, O2L22SA2, O1L17SA2. The future growth scenario high density with 50 units per acre build out cited herein 4.5 indicate slightly more gravity sewer capacity issues. These pipes operate at or above capacity in the 50 unit build out scenario: O2L34SA9, O1L14SA2, O2L34SA3, O2L34SA6, O1L14SC1, O1L14SC2, O1L14SC3, O2L34SA8, O1L14SC4, O1L17SA10, O1L14SC5, O2L3SA1, O1L17SA9, O2L35SA1, O1L17SA11, O1L14SC5, O2L22SA2, O1L17SA2, O1L14SC4, O1L17SA10, O1L17SA1, O1L17SA3, O2L22SA4. These issues have been addressed herein in the conclusions and recommendations identifying the gravity sewer capacity deficiencies and remedies.

6.7 Town Outfall and Treatment Plant Capacity:

- Capacity at outfalls:
  - Outfall One or O1 is located near the entrance to lift station 19 nearly 1,080 feet from the intersection of Pembroke Park Road and South Park Road. The Town forcemain ties into the City of Hollywood Force main at this location. The capacity of this tie-in is the limited to the difference of Town Outfall Two or O2 and the Large User Agreement Capacity with the City of Hollywood.
  - Outfall Two or O2 is located in the Northeast Corner of the Town

Park or Pembroke Park Preserve; on the West side of 48th street, nearly 90 feet south of the intersection of 48th street and SW 31st St. The Town ties into an existing county force main that flows to the City of Hollywood System. The capacity at this outfall is limit by the interconnect agreement with the Town of Pembroke Park and the County executed via Town Resolution when the town tied into the County force main. Retired City Staff recall this tie in may have been completed around 2004. The flow through this outfall is limited to the difference between the flow out of Outfall One and the City of Hollywood Large User Agreement Capacity. The flow is also limited by the physical constraints of the existing infrastructure of the town, Broward County and the City of Hollywood.

- The physical constraints or capacity are detailed in the Node Reports and Force Main Report in the sewer model.

- Capacity at Hollywood Sewer Treatment Plant
  The Town of Pembroke Park utilizes the City of Hollywood to treat the sanitary sewage. As per the Southern Regional Wastewater Treatment Plant July 2024 Large User Capacity Report (GPD) the Town of Pembroke Park is currently exceeding capacity at nearly -98,850 gpd. This is placing the Town currently at nearly 109% capacity encumbered. The Town of Pembroke Park requested Craig A. Smith and Associates to draft and submit a Future Sewerage Usage Letter to for a future allocation of 2,335,176 Gallons per Day. See attached City of Hollywood Large User Agreement, Large User Capacity Report, and Town of Pembroke Park Future Sewage Use Treatment Capacity Allocation letter by Craig A. Smith and Associates.
- Inflow and Infiltration impact on capacity: Inflow and infiltration can have a significate impact on actual usage. The Town has taken steps toward eliminating the I and I issues in the Town. A noticeable decline in usage was identified with lining and eliminating Inflow and infiltration issues in the lift station #17 area. CAS highly recommends continuing these gravity sewer lining projects for the remaining clay gravity sewers in the Town to reduce the Inflow and Infiltration flow being collected by Pembroke Park and sent to the Hollywood treatment plant. It the Town can complete the I and I work there is high likelihood that sewerage flow to the Hollywood plant could be reduced to levels below 100% capacity allowing the Town to grow and add developments and not be impacted by fees for flows exceeding 100% the Town of Pembroke Park sewer flow allocation.
- Future growth Medium High development density of 25 units per acre build-out impacts will increase flows and require the more allocation sewer capacity allocations from the City of Hollywood.
- Future growth Medium High development density of 25 units per acre build out impacts will increase flows and require the more allocation sewer capacity allocations from the City of Hollywood.

7.0 Supporting Documents

7.1 Large User Agreement

See Exhibit 9.A for the Large User Agreement, including the correct flows.

7.2 Broward County Interlocal

See Exhibit 9.B for the Broward County Interlocal, including the agreement to Hollywood and the treatment facility.

7.3 Coca Cola Rate Agreement

See Exhibit 9.C for the Coca Cola Rate Argument, which includes 2010 resolution, the reduction in volume based on product distribution, and the City of Hollywood's excess wastewater pH and Acidity concentration Resolution per 1996.

8.0 CONCLUSIONS AND RECOMMENDED IMPROVEMENTS

8.1 Recommended Improvements

The Town of Pembroke Park should address their forcemain and gravity sewer collection system to incorporate the following modifications:

- **Lift Station 35 Basin Gravity Sewer Pipe Size Increase:**
  This 8" gravity sewer pipe # O2L35SA1 located at lift station 35 is at nearly 91% capacity. Adding a 10% Inflow and Infiltration to flow to this scenario will put this pipe at 100% capacity. It is recommended that this pipe be increased to a 12" pipe to ensure this pipe systems does not surcharge in the future.

- **Lift Station 35 Basin Gravity Sewer Pipe Size Increase:**
  This 8" gravity sewer pipe # O2L3SA1 located at lift station 3 is at nearly 100% capacity. Adding a 10% Inflow and Infiltration to flow to this scenario will put this pipe above capacity. It is recommended that this pipe be increased to a 12" pipe to ensure this pipe systems does not surcharge in the future.

- **Lift Station 17 Basin Gravity Sewer Pipe Size Increase:**
  These 8" gravity sewer pipe #s: O1L17SA9, O1L17SA10 located at lift station 17 gravity system is at capacity. Adding a 10% Inflow and Infiltration to flow to this scenario will put this pipe above capacity. It is recommended that this pipe be increased to a 12" pipe to ensure this pipe systems does not surcharge in the future.

- **Lift Station 14 Basin Gravity Sewer Pipe Size Increase:**
  These 8" gravity sewer pipe #s: O1L14SC5, O1L14SC4, O1L14SC3, O1L14SC2, O1L14SC1, O1L14SA2 located at lift station 14 gravity system is at capacity as shown on the Atlas. Adding a 10% Inflow and Infiltration to flow to this scenario will put this pipe above capacity. It is recommended that this pipe be increased to a 12" pipe to ensure this pipe systems does not surcharge in the future.

- **Lift Station 34 Basin Gravity Sewer Pipe Size Increase:**
  These 8" gravity sewer pipe #s: O2L34SA9, O2L34SA3, O2L34SA6, O2L34SA8 located at lift station 34 gravity system is at capacity as shown on the Atlas. Adding a 10% Inflow and Infiltration to flow to this scenario will put this pipe above capacity. It is recommended that this pipe be increased to a 12" pipe to ensure this pipe systems does not surcharge in the future.

- **Force Main Pipe Size Increase:**
  Force are typically are designed not to exceed a velocity of 10 ft/s capacity. These 10 inch pipes located near Outfall 2, Lift Station 19 are exceeding the 10 ft/s second design criteria. Pipe sizes for these force mains should be increased to 12 in to reduces excessive pump head requirements, reduce pump energy cost and increase pump flow through the system for these pipes: O2L19FB2, O2L19F2, O2L19F1, O2L34F1, O2L34F2.

- **Capacity conclusion and recommendations**:
  The Town of Pembroke Park is highly recommended to seek additional capacity from the City of Hollywood in the Southern Regional Wastewater Treatment Plant. Currently the Town has 1.11 million GPD allocated

- **Southwest 30th Street Project**
  Complete the SW 30th Street project which includes abandonment of all existing private and public lift stations (#13, 15, 33, 12, 11, and 10). along SW 30th Street. Install two new lift stations and gravity collection system. Connect the East lift station to the Town's East system and connect the proposed West lift station to the Town's West system.

- **Southwest 30th Avenue Project**
  Install a gravity sewer collection system, including a lift station and force main, to take the SW. 30th Avenue area between Pembroke Rd. and Hallandale Beach Blvd. off septic tanks.

- **Southwest 25th Court Project**
  Install a gravity sewer collection system, including a lift station and force main, to take the SW. 30th Court area between Dale Village and SW 56th Ave off septic tanks.

- **Lift Station #14 Project**
  Replace lift station #14 with a modern submersible lift station and valve box, constructed of concrete and supplied with modern electrical controls. The typical small duplex pump station will most likely have a pair of 10 to 15 HP pumps rated at 100 to 200 gpm at 100 feet total dynamic head (TDH).

- **Dale Village Sewer Rehabilitation Project**
  Rehabilitate gravity sewer system for Dale Village located in the lift station #14 system. Line all Clay pipe in Dale Village to eliminate Inflow and Infiltration.

- **Lift Station #17 Project**
  Replace lift station #17 with a modern submersible lift station and valve box, constructed of concrete and supplied with modern electrical controls. The typical small duplex pump station will most likely have a pair of 10 to 15 HP pumps rated at 100 to 200 gpm at 100 feet total dynamic head (TDH). Line degraded gravity sewer system throughout the lift station #17 Basin.

- **Lift Station 22 & Lift Station 26 System Abandonment Project**
  The gravity sewer systems affiliated to lift station #22 and #26 have considerable inflow and infiltration issues. The mobile home / RV park formally known as the Lakeside Mobile Home Park has no residents, . The system may be experiencing Inflow and Infiltration issues due to improper service disconnects during mobile home removal upon Mobile Home/RV Park closure. The majority of the sewer systems in this location could be sealed off and abandoned to alleviate the Town of continual operation, maintenance, inflow and infiltration from these systems and lift stations.

- **Town Code Enforcement Project**
  Enforce the Town code requiring all the properties with sanitary sewer access to connect into the system and pay sewer fees.

- **Lift Station 4 & Lift Station 5 Rehabilitation Project**
  Rehabilitate Systems for lift station #5 and lift station #4 in Pembroke Park Lakes Mobile Home Park, by lining the gravity sewer and replacing the force main, redirecting the flow to the force main to SW 32 Avenue and Hallandale beach Blvd with backflow protection. Upgrade lift station #4 and #5 pumps, panels, and add SCADA.

- **Lift Station 18A Replacement, Gravity Sewer and Force Main Installation:** Combine gravity systems for lift station #6, 7, 18, 18a, 23, 24, 25 and replace with one lift station at the current lift station #18A location, lining clay pipe and replacing lines as necessary to redirect flow to the new station. Install gravity sewer and new lift station at a depth necessary to combine all gravity systems associated with the said lift

stations. replace forcemain from new lift station at 18a to park road forcemain at the intersection of Park Road and Hallandale Beach Blvd.

- **Phase I:** 18A lift station replacement and gravity sewer Installation and force main. Install SCADA system and generator.
- **Phase II:** Lift station #24 and #25 abandonment and connect by gravity to new lift station #18A. Rehabilitation of gravity systems for lift station #24 and #25.
- **Phase III:** Lift station #7 and #23 abandonment. Install gravity sewer from Systems #7 and #23 to new lift station #18A. Abandon old forcemain.
- **Phase IV:** Lift station #1 and #6 abandonment. Install gravity sewer from systems #1 and #6 to new lift station #18A. Abandon old forcemain.

- **Lift Station 2 and Lift Station 3 System Rehabilitation Project**
  Line gravity system 3 and replace the force main from lift station #3 to lift station 5 on West Lake Drive. Line gravity system for lift station #2 and replace and reroute lift station force main along Lakeshore Drive to forcemain at lift station #3.

- **Park Road Sewer Phase 1:** Install Gravity Sewer along Park Road from Carolina Street to Pembroke Road Rehabilitation lift station #16 to serve additional flows.

- **Park Road Sewer Phase 2:** Combine gravity sewer system for lift station #29, lift station #30, lift station #31, by installing gravity system from lift station #31 along SW 30th Court collect lift station #30 and lift station #29. Install gravity sewer from Carolina Street to SW 24th Street. This project will also eliminate approximately 10 septic systems along Park Road. Upgrade forcemain from 24th Street to Carolina St.

- **Park Road Sewer Phase 3:** Combine gravity systems for lift station 9, 32, by installing a gravity sewer line along Park Road from 24th Street to lift station #34 / Master lift station. Add gravity sewer along SW 25th Street from lift station #32 to proposed gravity sewer on Park Road. Add gravity sewer from lift station #9 to proposed gravity sewer on Park Road. Upgrade Park Road forcemain up Park Road from Hallandale Beach Blvd.

9.0 Exhibits

EXHIBIT A
CITY OF HOLLYWOOD LARGE USER'S AGREEMENT

R-90-121
9/5/90

LARGE USER WASTEWATER AGREEMENT

Between

THE CITY OF HOLLYWOOD, FLORIDA

and

PEMBROKE PARK, FLORIDA

LARGE USER WASTEWATER AGREEMENT
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EXHIBITS:

A MAP OF HOLLYWOOD SYSTEM SERVICE AREA

B MAP OF PEMBROKE PARK'S SERVICE AREA

C MAP SHOWING POINTS OF CONNECTION AND METER LOCATIONS

D REPORT RELATING TO OPERATING, MAINTENANCE AND ADMINISTRATIVE COST DATA AND COMPUTATIONS AND ILLUSTRATIONS RELATING TO SAME

LARGE USER WASTEWATER AGREEMENT

THIS AGREEMENT made and entered into in Broward County, Florida, as of this 1st day of October, 1990, by and between the CITY OF HOLLYWOOD, a municipal corporation of the State of Florida (hereinafter referred to as "HOLLYWOOD"), and the PEMBROKE PARK, a municipal corporation of the State of Florida (hereinafter referred to as "PEMBROKE PARK")

W I T N E S S E T H:

WHEREAS, HOLLYWOOD and PEMBROKE PARK entered into that certain Large User Wastewater Agreement dated the 7th day of March, 1973, as amended, to provide for utilization of a common area wide wastewater collection, treatment and disposal facility (collectively the "Prior Agreement"); and

WHEREAS, the parties deem it mutually beneficial to continue to utilize the Hollywood Regional Wastewater Treatment and Disposal Facilities and the HOLLYWOOD Transmission Facilities, as such terms are defined herein; and

WHEREAS, the parties hereto have therefore determined to replace the Prior Agreement with this Agreement in order to provide for the technological advances, more stringent environmental regulations and governmental requirements which have occurred and which have caused the Prior Agreement to be inadequate to address current issues.

NOW, THEREFORE, for and in consideration of the mutual terms and conditions, promises, and covenants hereinafter set forth, HOLLYWOOD and PEMBROKE PARK agree as follows:

ARTICLE I. DEFINITIONS

Unless otherwise specifically set forth elsewhere herein, the following words and phrases used in this Agreement shall have the following meanings:

Any word or term related to "water" or "wastewater" shall have the definitions listed in the "Glossary - Water and Wastewater Control Engineering" 1981, Third Edition, published by the American Public Health Association, American Society of Civil Engineers, American Water Works Association and Water Pollution Control Federation.

1. "Annual Average Daily Flow" or "ADF" shall mean the flow determined by the total flow in gallons for a one year period divided by 365 days (or 366 days in the event of a leap year). The one year period shall be a Fiscal Year as defined herein.

2. "Consulting Engineer" shall mean that professional engineer or engineering firm selected and retained from time to time by HOLLYWOOD to perform engineering services pursuant to this Agreement.

3. "Debt Service Charges" (Treatment, Disposal and/or Transmission) shall include PEMBROKE PARK's applicable share of principal, interest, and coverage requirements on presently outstanding or new issues of revenue bonds, refunding bonds, bank financings or other obligations and including, but not limited to, bond agent fees, credit enhancement fees or service charges, heretofore or hereafter issued by HOLLYWOOD for the benefit of the Large Users and the HOLLYWOOD System. Each Large User's

applicable share of Debt Service Charges for upgrading and expansion shall be based on the formulae set forth in Article IV 2(b) hereof.

4. "Depreciation Charges" A proportionate share of the three (3%) percent per year depreciation on those portions of the HOLLYWOOD System constructed from revenues of HOLLYWOOD other than HOLLYWOOD sewer system bond proceeds and federal grants, as more particularly set forth in Article IV 2(c) below.

5. "Domestic Wastewater" shall mean such wastewater as is derived from residential dwellings, business buildings, institutions and the like.

6. "Financial Consultant" shall mean a firm of certified public accountants, engineers, economists, financial advisors, or any other qualified entity, selected by HOLLYWOOD from time to time to provide financial consultation services pertaining to this Agreement.

7. "Fiscal Year" shall mean a twelve (12) month period which commences on October 1st of each year and ends on September 30th of the following year.

8. "Hollywood Transmission Facilities" shall mean those facilities within the municipal jurisdiction of HOLLYWOOD, owned or operated, or both, by HOLLYWOOD, and shall include present facilities as well as any future facilities that are used now or will be used in the future for the purpose of transmitting wastewater to the Hollywood Treatment Facilities.

9. "Hollywood Regional Wastewater Treatment and Disposal Facilities" or "Hollywood Treatment Facilities" shall

mean those facilities owned or operated, or both, by HOLLYWOOD for the purpose of wastewater treatment and disposal, including any future additions, improvements or modifications to or extensions of these facilities that may occur from time to time, whether said facilities are within the municipal jurisdiction of HOLLYWOOD or not.

10. "Hollywood System" shall mean collectively the HOLLYWOOD Regional Wastewater Treatment and Disposal Facilities and the HOLLYWOOD Transmission Facilities, which System is hereby deemed to be a Publicly Owned Treatment Works (POTW) under 40 CFR 403. This term shall not include any physical facility that relates solely to the retail collection system of HOLLYWOOD. A map depicting the HOLLYWOOD System Service Area is attached hereto as Exhibit "A".

11. "PEMBROKE PARK System" shall mean the entire wastewater system including manholes, laterals, gravity sewers, lift stations, pumping stations, force mains, and the appurtenances thereto, and belonging to PEMBROKE PARK, whether within the corporate limits of PEMBROKE PARK or not.

12. "PEMBROKE PARK Service Area" shall mean the geographic boundaries in which: (i) PEMBROKE PARK is responsible for providing wastewater collection and transmission services to the HOLLYWOOD System, and (ii) HOLLYWOOD is responsible for providing treatment services to PEMBROKE PARK, both as more particularly described in Exhibit "B" attached hereto and made a part hereof. The parties agree that PEMBROKE PARK Service Area, as defined herein, shall also include any modifications to such

Service Area as a result of annexations, deannexations, or by mutual written agreement of the parties. Any change in PEMBROKE PARK's Service Area shall be deemed to automatically amend Exhibit B hereto, as necessary to correct the PEMBROKE PARK Service Area map.

13. "Industrial User" shall mean a user as defined in 40 CFR, as amended.

14. "Industrial Wastes" shall mean liquid wastes from any industrial process, cooling water discharge, or wastes exclusive of those which are Domestic Wastewater as defined in paragraph 5 of this Article.

15. "Infiltration and Inflow" shall mean water entering the sewer system and service connections from the ground (Infiltration) or water discharged into a sewer system or service connections from a roof, yard or street drains, cooling water discharges, manhole covers removed for storm drainage (Inflow). Infiltration and Inflow are mutually exclusive terms.

16. "Large User" shall mean any county, municipality, special district and any other entity which operates wastewater collection or transmission facilities which connect into the Hollywood System. The term "Large User" shall refer only to those counties, municipalities, special districts and other entities which have executed this form of agreement containing substantially the same terms and conditions. HOLLYWOOD shall be included within the defined term "Large User" when said term is used in conjunction with the obligations of the Large User for Debt Service Charges; Renewal, Replacement and Improvement

Account Charges; Depreciation Charges; and Operation, Maintenance and Administrative Costs; the flow projections contained in Article II hereof; the pretreatment requirements contained in Article III hereof; any penalty or compensatory charges set forth herein; and the non-monetary default provisions contained in Article VII hereof. When Hollywood is included as a Large User as set forth above, then Hollywood shall be bound by all terms, conditions, liabilities and obligations of all Large Users as set forth herein.

17. "Large Users' Advisory Committee" shall mean an advisory committee comprised of the appropriate and technically qualified representative of each of the Large Users, including HOLLYWOOD, and which shall have the rights and responsibilities set forth in Article VIII hereof.

18. "MGD" as used herein is an abbreviation for the term "million gallons per day."

19. "Operation, Maintenance and Administrative Costs" shall mean any reasonable and necessary expenses of operation, maintenance and administration of the HOLLYWOOD System, including but not limited to all HOLLYWOOD Treatment Facilities expenses, (including all costs attributable to the General Pretreatment Regulations, 40 CFR 403), allocable transmission expenses, allocable utility administration expenses, allocable utility accounting expenses, allocable general fund administration expenses, all as set forth more completely in composite Exhibit "D" attached hereto and made a part hereof.

20. "Points of Connection" shall mean those points where PEMBROKE PARK's system connects to the HOLLYWOOD System for the purpose of delivering PEMBROKE PARK's wastewater into the HOLLYWOOD System from PEMBROKE PARK's System, which points of connection are more particularly described as set forth in Article II below.

21. "Renewal, Replacement and Improvement Account Contribution" shall mean a monthly contribution, as more particularly described in Article IV 2(d) below, which contribution shall be in addition to all other charges due to HOLLYWOOD from PEMBROKE PARK, and shall be deposited into an account ("Renewal, Replacement and Improvement Account") to be established and utilized by HOLLYWOOD for renewal, replacement and improvement of the HOLLYWOOD System, as more particularly described in Article IV 2(d) below. The account established for PEMBROKE PARK shall be, through standard accounting techniques, segregated from any Renewal, Replacement and Improvement Account established by HOLLYWOOD for any other Large User.

ARTICLE II. CONNECTION TO THE HOLLYWOOD SYSTEM

1. Points of Connection.

The parties hereto agree that the points of connection of PEMBROKE PARK's System to the HOLLYWOOD System and meter locations shall be as set forth in Exhibit "C", attached hereto and made a part hereof.

2. Easement Points of Connection. HOLLYWOOD may locate the points of connection as per Exhibit "C" and provide for meter locations, and may locate meters on property currently being used by PEMBROKE PARK for wastewater transmission facilities. PEMBROKE PARK shall convey at no cost to HOLLYWOOD, an appropriate easement to the property as needed by HOLLYWOOD for the point of connection, meter locations, as necessary to provide ingress and egress to said facilities.

3. Maintenance of PEMBROKE PARK's Facilities.

a. PEMBROKE PARK agrees to keep facilities located within its Service Area or under control of PEMBROKE PARK through any agreement with the State, a county, or municipal government or authority or private party, in such condition so as to reasonably prevent any Infiltration or Inflow which would result in extraordinary levels of groundwater or storm water into PEMBROKE PARK's System, and thereby into the HOLLYWOOD System.

b. PEMBROKE PARK agrees to adopt, enact and enforce such rules, regulations or ordinances as may be required from time to time to ensure that PEMBROKE PARK, or users of PEMBROKE PARK's system are not discharging or causing to be discharged waters or waste which would cause PEMBROKE PARK's wastewater to

be unacceptable under the provisions of Article III of this Agreement.

c. PEMBROKE PARK agrees to be responsible for prompt implementation in its system of all actions required by any federal, state or local regulations imposed on HOLLYWOOD or the HOLLYWOOD System, or PEMBROKE PARK, either now or in the future with regard to the collection, treatment, transportation and disposal of wastewater, including, but not limited to, EPA general pretreatment requirements as contained in 40 CFR 403, and as same may be amended from time to time.

4. Service Area. PEMBROKE PARK agrees that it shall not accept wastewater from outside its Service Area for transmission to the HOLLYWOOD System unless PEMBROKE PARK receives approval from HOLLYWOOD and any regulatory agencies that have jurisdiction over the matter for said connection prior to its being made, with such approval being the subject of a written supplement or agreement which shall be attached hereto and made a part hereof. The parties hereto acknowledge that all contractual obligations regarding connection to and transmission to the HOLLYWOOD System existing as of the date of this Agreement, have been disclosed by each party to the other. Any agreement(s) between Large Users to exchange, trade, sell, assign or otherwise agree with respect to the use of each others flows within their respective Service Areas must be approved, in writing, by HOLLYWOOD. Unless otherwise expressly agreed to in writing, HOLLYWOOD has no obligation to accept or provide service for any wastewater which originates outside of PEMBROKE PARK's Service

Area. Subject to Article II, Section 6.B. hereof, PEMBROKE PARK agrees that it shall cause all wastewater flow generated within its present Service Area as defined in Exhibit "B", to be transmitted to the HOLLYWOOD System.

5. Future Flow Projections. PEMBROKE PARK agrees that it shall annually review its needs for wastewater transmission, treatment and disposal service, and shall, with advice and counsel of a professional engineer project its future ADF needs to the best of its knowledge and ability, for both the next ensuing Fiscal Year and the tenth year projection to HOLLYWOOD, by written notice, on or before March 1st of each year. Said projections shall be in such a format as may be requested by HOLLYWOOD from time to time and shall provide the following information:

(1) Average Daily Flow (MGD) for the next ensuing Fiscal Year; and

(2) Average Daily Flow (MGD) anticipated during the three months of greatest flow.

6.A. HOLLYWOOD's Obligation to Provide Wastewater Treatment Services. HOLLYWOOD acknowledges and agrees that in accordance with the terms and conditions of this Agreement and the other Large User Agreements, it has an affirmative, continuing obligation to provide wastewater treatment services to PEMBROKE PARK and the other Large Users with respect to wastewater flows within the Hollywood Service Area as shown on Exhibit A. HOLLYWOOD's obligation to provide wastewater services to PEMBROKE PARK shall continue until such time as this Agreement

is terminated in accordance with Article VI hereof, or until such time, if any, as HOLLYWOOD is ordered to stop treating PEMBROKE PARK's flows by injunction or final order of a court of competent jurisdiction or by a regulatory agency with the jurisdiction to issue such an order or injunction.

6.B. Projected Flows (ADF). PEMBROKE PARK acknowledges that HOLLYWOOD will rely on PEMBROKE PARK's future flow projections for ADF for the Fiscal Year 1999-2000, as set forth herein, in calculating and planning for the initial HOLLYWOOD System capacity expansion and the financing for same, and that any material increase or decrease in the amount of actual ADF from that disclosed or projected could seriously impact on HOLLYWOOD and the other Large Users with regard to their obligations concerning plant expansion and financing of same. Accordingly, except for those "Excess Flows" as defined herein, which PEMBROKE PARK elects to flow to an alternate system, PEMBROKE PARK agrees that it shall cause all wastewater collected within its Service Area as defined in Exhibit "B" hereto to be transmitted to the HOLLYWOOD System throughout the term of this Agreement. In addition, PEMBROKE PARK agrees that it shall not cause any wastewater collected within its Service Area, as defined in Exhibit "B" hereto, to be transmitted to the HOLLYWOOD System in excess of its projected flows set forth herein for the Fiscal Year 1999-2000 throughout the term of this Agreement, unless PEMBROKE PARK acquires or leases additional flow capacity from another Large User as set forth in Article II, Section 4, herein or unless HOLLYWOOD makes a further plant

capacity expansion to accommodate PEMBROKE PARK's additional flow needs. Debt Service Charges relating to any additional plant capacity expansions shall be borne by those Large Users who require said expansions in proportion to their respective needs.

PEMBROKE PARK hereby makes the following ADF Flow projections for the Fiscal Years indicated.

FISCAL YEAR 10/1-9/30	ADF (RESERVE CAPACITY MGD)
1988-1989	0.69
1999-2000*	1.00

* Fiscal Year 1999-2000 projections to be used by HOLLYWOOD for purposes of planning HOLLYWOOD System capacity expansion to the year 2000.

HOLLYWOOD shall have the right and power to enforce the limitation of its obligations hereunder either by suit or other proceedings at law or in equity and to take such action as necessary to prohibit PEMBROKE PARK from transmitting wastewater into HOLLYWOOD's Transmission and Treatment Facilities which exceeds 110% of the amount of PEMBROKE PARK's Annual Average Daily Flow as projected for a given Fiscal Year. Subject to obtaining HOLLYWOOD's and any regulatory agency's prior written consents, which consent from HOLLYWOOD shall not be unreasonably withheld, PEMBROKE PARK may transmit only those flows from within its Service Area which exceeds the ADF projected for Fiscal Year 1999-2000 (the "Excess Flows") as set forth above to available alternate systems for wastewater treatment. HOLLYWOOD shall have

no obligations or liabilities with respect to any Excess Flows which PEMBROKE PARK elects to transmit to any alternate system.

7. Meters. To the extent that HOLLYWOOD has not already done so, HOLLYWOOD shall furnish and install wastewater metering, recording and transmitting devices to be located at the sites as set forth in Exhibit "C". HOLLYWOOD shall retain ownership of the metering, recording and transmitting devices, together with any appurtenances thereto. PEMBROKE PARK shall reimburse HOLLYWOOD for the design, construction, calibration, and financing costs of such devices, to the extent that PEMBROKE PARK has not already done so, within thirty (30) days of receiving the invoice for said costs. The type of equipment selected shall be at the discretion of HOLLYWOOD; however, HOLLYWOOD shall require the manufacturer of the equipment to submit certified calibration tests to PEMBROKE PARK and HOLLYWOOD.

8. Meter Maintenance. HOLLYWOOD shall have a semi-annual inspection report prepared regarding the condition and accuracy of the metering device by a representative of the meter manufacturer. The expense for the annual inspection shall be an operating charge of the HOLLYWOOD facilities. A copy of this semi-annual report shall be furnished to PEMBROKE PARK.

9. Meter Accuracy. The parties hereto agree that should the metering equipment installed by HOLLYWOOD be found to be inaccurate beyond the manufacturer's range of accuracy, the meter will be assumed to be inaccurate since the last meter check or for a period of three (3) months, which ever time is less, and

the following month's billing will be adjusted to show a credit or additional charge to PEMBROKE PARK for metered flow for that period. If PEMBROKE PARK, for whatever reason, requests a meter report in addition to the semiannual reports, HOLLYWOOD will comply. If the meter was malfunctioning or required calibration, the expense associated with PEMBROKE PARK's request will be an operating expense to the HOLLYWOOD System. If the meter report indicates the meter was operating properly within the manufacturer's guaranteed range of accuracy, PEMBROKE PARK will be charged in the subsequent monthly bill for the expenses associated with the inspection.

10. Meter Failure. The parties agree that if at any time during this Agreement a metering device shall in any way fail to tabulate the flow into the HOLLYWOOD collection and treatment facilities, each successive monthly charge shall be based on the last available meter reading and adjusted to equal the same percent of total plant flow each month until the meter is once again fully operational.

11. Registration of Meter. Registration of a meter, when maintained as above, shall be binding on both parties for all wastewater flow charges. Access to the meters shall be available to PEMBROKE PARK upon request and in the presence of a representative of HOLLYWOOD.

12. Meter Reading. Meter reading for billing purposes shall occur as nearly as possible on the 25th day of each month.

ARTICLE III. LIMITATION ON DISCHARGE OF CERTAIN WASTES

1. Type of Waste to be Discharged.

a. Except as hereinafter provided, PEMBROKE PARK shall not discharge nor cause to be discharged any of the waters or wastes described in paragraph b. below, into the HOLLYWOOD System. All of the quality limitations enumerated below apply to concentrations or other physical characteristics obtained from analysis by HOLLYWOOD of representative samples of the waste collected, which samples upon request of PEMBROKE PARK in writing will be divided between HOLLYWOOD and PEMBROKE PARK. Such analysis as set forth herein shall be made in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater" prepared and published jointly by the American Public Health Association, the American Waterworks Association and the Water Pollution Control Federation for so long as same is continued to be published. In the event these standards are no longer published, the parties shall agree on the standard for such analysis.

b. No person shall discharge or cause to be discharged any of the following described waters or wastes into the HOLLYWOOD System.

(1) Any inflow and that infiltration which can be deemed cost effective to correct.

(2) Any wastewater or vapor having a temperature higher than one hundred fifty (150°) degrees Fahrenheit (65°C).

(3) Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, solid or gas.

(4) Any waters or wastes having a pH lower than 5.5 or higher than 9.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel of HOLLYWOOD.

(5) Any wastewater containing constituents in concentrations which are in excess of the concentrations set forth for normal wastewater:

BOD5	400 ppm
TSS	400 ppm
TKN	30 ppm
Phosphorus (P)	15 ppm
COD	800 ppm
TDS	2000 ppm

(6) Any waters containing toxic or poisonous solids, liquids or gases in sufficient quantities, which either singly or by interaction with other wastes, may injure or interfere with any waste treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the wastewater treatment plant, as sampled at or in the immediate vicinity of the point of discharge to the HOLLYWOOD System. The maximum limits for the below listed substances are:

Antimony	0.200 ppm
Arsenic	0.100 ppm
Barium	5.000 ppm
Beryllium	0.010 ppm
Bismuth	0.045 ppm
Boron	1.000 ppm
Cadmium	0.500 ppm
Chlorides	600.000 ppm
Chromium, Hexavalent	0.500 ppm
Chromium, Total	1.000 ppm
Cobalt	1.000 ppm
Copper, (Total)	2.000 ppm
Cyanides	0.250 ppm
Hydrogen Sulfide	3.000 ppm
Iron	10.000 ppm
Lead	0.400 ppm
Manganese	1.000 ppm

Mercury	0.100 ppm
Molybdenum	0.500 ppm
Nickel	1.800 ppm
Phenols	0.005 ppm
Selenium	0.100 ppm
Silver	0.240 ppm
Strontium	0.200 ppm
Tellurium	0.001 ppm
Tin	0.800 ppm
Toxic Radioactive Isotopes without a special permit	0.000 ppm
Zinc, (Total)	1.000 ppm
Pesticides	0.010 ppm
Herbicides	0.010 ppm
Fungicides	0.010 ppm

The maximum allowable values of the substances listed above may from time to time be revised by federal, state, local regulatory agencies, or HOLLYWOOD, if determined by the Consulting Engineer to be in the best interest of the Hollywood System, in which case PEMBROKE PARK agrees not to exceed such revised maximum limits. HOLLYWOOD shall provide PEMBROKE PARK, written notice, of any amendment or change to said schedule.

(7) Any solid or viscous substance in quantities or of such size capable of causing obstruction to the flow in the sewers or an interference with the proper operation of the wastewater facilities, such as, but not limited to, ashes, cans, sand, straw, shavings, metal, glass, tar, wax, lime slurry, lime residues, chemical residues and paint residues.

(8) Any wastewater containing more than twenty-five (25) milligrams per liter of petroleum oil, non-biodegradable cutting oils, or products of mineral oil origin.

(9) Any water or waste containing more than one hundred (100) milligrams per liter of biodegradable oils, fat,

grease or any oily substances, whether singularly or in a combination.

(10) Any water or wastes containing suspended solids or color or other such characteristics in quantity that unusual attention or expense is required to handle such material at the HOLLYWOOD facility, without a special permit.

(11) Any noxious or malodorous gas or substance which either singularly or by interaction with other wastes, is capable of creating a public nuisance or hazard to life, or which prevents or makes unduly hazardous the entry into sewers for maintenance and repair.

(12) Any water or wastes containing substances which are not amenable to treatment or reduction by the wastewater treatment processes employed, or are amenable to treatment only to such degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

(13) Any waters or wastes which constitute a hazard to any structure or appurtenances of the HOLLYWOOD System.

(14) Any water or waste which singularly or in combination with other waters or wastes that inhibit or interfere with the treatment process or may render the treatment plant effluent toxic as determined by regulatory permit requirements.

(15) Any waters or wastes that render the sludge produced by the treatment plant to be other than a Class-I sludge as defined by Florida's Department of Environmental Regulation.

(16) Any substance or constituent in violation of "Federal (National) Categorical Pretreatment Standards" as issued by the United States Environmental Protection Agency, including any amendments or successor enactments thereto, or which exceeds, or would exceed, federal, state or local quality requirement, unless the discharge is allowable by a duly issued operating permit from the Broward County Environmental Quality Control Board.

2. Compliance.

(a) If at any time PEMBROKE PARK shall not comply with the restrictions imposed upon it in the preceding portion of this Article, or if PEMBROKE PARK shall create any condition which HOLLYWOOD should determine destructive to any part of HOLLYWOOD's System, HOLLYWOOD shall give thirty (30) days written notice to PEMBROKE PARK to discontinue such operation or practice, within which period PEMBROKE PARK agrees to comply. If PEMBROKE PARK does not initiate and/or establish a compliance program within ninety (90) days of notification, and/or if any damages result from the discharge of improper wastes by PEMBROKE PARK, HOLLYWOOD reserves the right to provide such preliminary treatment facilities or establish such programs as required to bring PEMBROKE PARK's discharge into compliance. PEMBROKE PARK will be responsible to HOLLYWOOD for all charges, both capital and operational for the establishment of these programs or facilities as described herein. Additionally, failure to comply with the conditions stipulated in Section 1 hereof, shall place PEMBROKE PARK in default of this Agreement.

(b) PEMBROKE PARK recognizes and agrees that HOLLYWOOD has the obligation and authority to perform the below as well as any future activities required by Environmental Protection Agency General Pretreatment Regulations, 40 CFR 403, Section 403.8, as set forth below: HOLLYWOOD agrees to notify PEMBROKE PARK, in writing, and will give PEMBROKE PARK the opportunity to take the appropriate action, prior to HOLLYWOOD taking any of the following actions.

(1) deny or condition new or increased contributions or pollutants, or changes in the nature of pollutants, to the HOLLYWOOD System by industrial user;

(2) require compliance with applicable pretreatment standards and requirements by industrial users;

(3) control, through permit, contract, order, or similar means, the contribution to the HOLLYWOOD System by each industrial user to ensure compliance with applicable pretreatment standards and requirements;

(4) require (a) the development of a compliance schedule by each industrial user for the installation of technology required to meet applicable pretreatment standards and requirements and (b) the submission of all notices and self-monitoring reports from industrial users as are necessary to assess and assure compliance by industrial users with pretreatment standards and requirements, including, but not limited to, the reports required in Paragraph 403.12;

(5) carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of

information supplied by industrial users, compliance or non-compliance with applicable pretreatment standards and requirements by industrial users;

(6) obtain remedies for non-compliance by an industrial user with any pretreatment standard and requirement.

(c) The parties mutually agree that no statement contained herein shall be construed as preventing any special agreement or arrangement between HOLLYWOOD and PEMBROKE PARK or any user within PEMBROKE PARK's Service Area, whereby an industrial waste of unusual strength or charter may be accepted by HOLLYWOOD for treatment, subject to additional payment by PEMBROKE PARK, or said user.

(d) HOLLYWOOD agrees to provide PEMBROKE PARK with written notification of changes to the Regulations and a copy of the EPA required Pretreatment Annual Report.

(e) Nothing contained herein shall obligate PEMBROKE PARK to pay any costs incurred by HOLLYWOOD for pretreatment facilities required as a direct result of discharge of improper wastes into the HOLLYWOOD System by other Large Users.

3. Sampling.

a. PEMBROKE PARK agrees to include in the design of its wastewater delivery system a sampling station so that HOLLYWOOD can take representative samples of the wastewater as a means of monitoring the characteristics of the wastewater received from PEMBROKE PARK, and PEMBROKE PARK shall further provide to HOLLYWOOD such right-of-way or easements as may be

necessary to assure HOLLYWOOD of access to the sampling station site. HOLLYWOOD shall, upon notification to PEMBROKE PARK, have the right at any time to collect samples of sewage and industrial wastes at selected locations within PEMBROKE PARK's facilities for the purpose of making laboratory analysis of these wastes. The cost of collecting and then testing such samples shall be considered a HOLLYWOOD facility treatment and effluent disposal operating expense.

b. PEMBROKE PARK shall, upon written request, submit annually to HOLLYWOOD, no later than April 1 of each year, a laboratory analysis conducted by a State certified laboratory of composite samples of the combined Industrial and Domestic Wastes leaving PEMBROKE PARK's facilities at each point of connection. The costs for said submission shall be borne by PEMBROKE PARK. PEMBROKE PARK shall give HOLLYWOOD five (5) days written notice exclusive of Saturday, Sunday and holidays, of its intent to take the required samples, in order that HOLLYWOOD may be present at the time the sample is taken. The analysis made pursuant to this paragraph shall be made on twenty-four (24) hour representative samples and may include temperature, pH, and those substances listed in paragraph 1b(3), (5), (6), (8) and (9) above. HOLLYWOOD shall direct PEMBROKE PARK as to the particular samples, including pesticides, herbicides and/or fungicides for which analysis is required.

4. Regulatory Action.

a. PEMBROKE PARK agrees to adopt, enact and enforce such necessary rules, regulations and/or ordinances as

may be required so as to ensure that the users of PEMBROKE PARK's system do not discharge or cause to be discharged waters or wastes which would cause PEMBROKE PARK's wastewater to be unacceptable under the provisions of this Article, and to furnish to HOLLYWOOD certified copies of said regulations, rules and/or ordinances within one hundred eighty (180) days from the date of enactment of same or one hundred eighty (180) days from the date of this Agreement, whichever shall first occur.

b. PEMBROKE PARK shall be responsible for implementation in its system of federal, state or local regulations imposed on HOLLYWOOD or PEMBROKE PARK, either now or in the future.

5. Additional Charge for Wastes of Unusual Strength. In lieu of the remedies set forth in paragraph 2 of the Article above, in the event of a violation or default by PEMBROKE PARK pursuant to this Article, PEMBROKE PARK shall be subject to an additional charge which shall, upon imposition, be included in PEMBROKE PARK's monthly billing(s) subsequent to said determination by HOLLYWOOD. Designation of waste as being of unusual strength or character shall occur when the contributed wastewater parameters exceed those set forth in paragraph 1 of this Article. The additional charge shall be based upon HOLLYWOOD's total cost incurred in providing treatment, additional treatment programs, or additional facilities for the treatment of such wastes of unusual strengths. Any monies received from this Section shall be applied by HOLLYWOOD first to pay for the cost of correcting the problem caused by PEMBROKE

PARK and then to reduce the relevant operating expense of the HOLLYWOOD System.

6. Emergency Action. Notwithstanding anything to the contrary contained above, if at any time during the term of this Agreement, HOLLYWOOD determines, in its sole and absolute discretion, that PEMBROKE PARK's failure to comply with the restrictions imposed upon it by this Agreement constitutes such an immediate threat to the HOLLYWOOD System and/or the public health or safety so as to constitute an emergency situation requiring immediate remedial action, then, in that event, HOLLYWOOD may declare an emergency situation to exist and upon written notice to PEMBROKE PARK, may proceed to take whatever corrective action it deems necessary as to said emergency to prevent further nuisance or damage to HOLLYWOOD's System without the necessity of giving notice (other than notice of the emergency situation) to PEMBROKE PARK or affording PEMBROKE PARK an opportunity to remedy the situation. Any costs incurred by HOLLYWOOD in response to an emergency situation shall be charged to PEMBROKE PARK, and shall be the sole responsibility of PEMBROKE PARK to pay.

ARTICLE IV. CHARGES AND BILLING

1. Annual Estimate. HOLLYWOOD shall estimate all costs (on a Fiscal Year basis) of providing wastewater transmission, treatment, and disposal services to PEMBROKE PARK beginning with Fiscal Year 88-89. This annual estimate shall be the basis for PEMBROKE PARK's monthly billings during the next succeeding Fiscal Year. Adjustments will be made annually as described below based upon actual flows and actual costs when known.

2. Billings Procedure. The parties hereto agree that HOLLYWOOD shall provide wastewater transmission, treatment and disposal services to PEMBROKE PARK, at rates and charges constituting the full and actual costs of such service, including but not limited to Operation, Maintenance and Administrative costs, Renewal, Replacement and Improvement Account Contributions, Debt Service Charges, Depreciation Charges, and compensatory charges, and HOLLYWOOD shall set the same proportionate rates and charges for all Large Users of the HOLLYWOOD System. PEMBROKE PARK shall pay a monthly charge to HOLLYWOOD, as calculated pursuant to Section IV-1. above, for wastewater transmission, treatment and disposal services provided by HOLLYWOOD, commencing on the date of execution of this Agreement. Such charges shall be paid to HOLLYWOOD by PEMBROKE PARK monthly, and shall include the following components:

a. Operation, Maintenance and Administrative Costs. Operation, Maintenance and Administrative Costs are defined in Article I, paragraph 19 hereof, and will be estimated

for each Fiscal Year. The portion of the monthly charge to PEMBROKE PARK for Operation, Maintenance and Administrative Costs shall be based on the estimated rate per thousand gallons and shall be applied on actual flow used by PEMBROKE PARK during the billing period.

(1) Adjustment to Operation, Maintenance and Administrative Costs. At the end of each Fiscal Year, an annual adjustment shall be computed to determine PEMBROKE PARK's share of the actual Operation, Maintenance and Administrative Costs. This computation will be based upon the actual operation, maintenance and administrative expenses recorded for the HOLLYWOOD System for that Fiscal Year, multiplied by PEMBROKE PARK's percentage of the actual number of gallons of wastewater treated and disposed of through the HOLLYWOOD System for that Fiscal Year. Each adjustment in the operation, maintenance and administrative monthly charges shall be made subsequent to, and subject to final verification of the operation, maintenance and administrative expenses incurred which verification shall be included in the annual review of said charges. The above-referenced annual review shall be performed by an independent Financial Consultant selected by HOLLYWOOD and shall be distributed to PEMBROKE PARK on or before March 31 of the year following the end of each Fiscal Year. In the event the annual adjustment reflects that an underpayment has been made by PEMBROKE PARK with regard to Operation, Maintenance and Administrative Costs, then the amount due and owing for said underpayment shall be shown as a separate line item on the next

monthly bill sent to PEMBROKE PARK after the adjustment has been made. In the event the annual adjustment reflects that an overpayment has been made by PEMBROKE PARK, with regard to Operation, Maintenance and Administrative Costs, then in that event the amount of said overpayment shall be credited to PEMBROKE PARK as a separate line item on the next monthly bill after the adjustment has been made.

b. Debt Service Charges. Debt Service Charges, as defined in Article I, paragraph 3, for the HOLLYWOOD System shall be computed annually as follows: (i) with respect to projects relating to improvement and upgrading of the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by taking the ratio of the amount of PEMBROKE PARK's actual flow to the total flow of the HOLLYWOOD System for each Fiscal Year, multiplied annually by the total debt service due in that Fiscal Year for such upgrading project(s); (ii) with respect to projects relating to the initial plant capacity expansion of the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by taking the difference between PEMBROKE PARK's actual ADF Flows for Fiscal Year 1988-89 and PEMBROKE PARK's projected ADF Flow for the Fiscal Year 1999-2000 and then dividing that difference by the projected increase in capacity in the HOLLYWOOD System over and above the total System capacity for the Fiscal Year 1988-1989 as a result of such planned capacity expansion; and then multiplying that fraction by the total debt service due in that Fiscal Year for such expansion project(s); provided however, PEMBROKE PARK's Debt Service Charges with

respect to this initial capacity expansion financing will be adjusted pursuant to Article II, Section 6.B. in the event that PEMBROKE PARK's actual flows exceed its projected flows for Fiscal Year 1999-2000; and (iii) with respect to projects relating to transmission pipes and related transmission facilities within the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by multiplying the proportional cost, based on design, of the new transmission facilities which are required by PEMBROKE PARK by the total debt service due in that Fiscal Year for such transmission project. In addition, except as otherwise set forth in Exhibit "D" hereto, any Debt Service Charges which may be due HOLLYWOOD from PEMBROKE PARK by reason of any financings relating to the HOLLYWOOD System under the Prior Agreement (other than financings for transmission) shall be recalculated in accordance with the applicable formulae set forth above. The above described formulae are illustrated in Exhibit "D" attached hereto. In determining which projects are related to upgrading or expansion of the Hollywood System, prudent engineering judgment shall be used. The Debt Service Charges relating to any additional plant capacity expansions of the HOLLYWOOD System shall be borne by the Large Users who require said expansion in proportion to their respective needs.

c. Depreciation Charges. Depreciation Charges as defined in Article I, paragraph 4 above, shall be computed based on PEMBROKE PARK's proportionate share (as established in the Prior Agreement) of the three (3%) percent per year depreciation

on the existing facilities constructed from revenues of HOLLYWOOD other than the HOLLYWOOD Sewer System Bond proceeds and federal grants; the cost of said facilities being One Million Ninety-Six Thousand Eight Hundred Sixty and 74/100 ($1,096,860.74) Dollars.

d. Renewal, Replacement and Improvement Account Contribution.

(1) Funds from the Renewal, Replacement and Improvement Account, shall be used for the improvement, repair and replacement of the HOLLYWOOD System. Said Account shall be funded through contributions made monthly by PEMBROKE PARK to said account. As of October 1, 1988, the balance in PEMBROKE PARK's Account is deemed to be zero, and all other amounts on deposit in said account shall be carried forward. HOLLYWOOD shall maintain a separate Renewal, Replacement and Improvement Account for each Large User. Any amounts collected by HOLLYWOOD for PEMBROKE PARK's Account shall be utilized by HOLLYWOOD only for renewals, replacements and improvements to the HOLLYWOOD System. HOLLYWOOD shall use prudent engineering judgment in determining the need for renewal, replacement and improvement projects. Expenditure of funds on deposit in each Large User's RR&I Account shall be made based on their respective percentage of the total System flows. The contributions made by PEMBROKE PARK to the Account shall be in addition to all other charges collected by HOLLYWOOD set forth herein. Except as otherwise provided herein, PEMBROKE PARK's monthly contribution to this Account shall be ten percent (10%) of PEMBROKE PARK's monthly total bill for wastewater transmission and treatment, including,

but not limited to, Debt Service Charges, Depreciation Charges, and Operation, Maintenance and Administrative Costs. Payments to said Account shall continue to be made monthly at the aforestated rate until such time as PEMBROKE PARK's Account contains funds equal to PEMBROKE PARK's share of a maximum amount of five (5%) percent of the actual cost of the HOLLYWOOD System, and as said System may be expanded from time to time. During any period in which PEMBROKE PARK's Account is maintained at a level equaling its pro rata share of five percent (5%) of the actual cost of the HOLLYWOOD System, as expanded, no monthly payments shall be due from PEMBROKE PARK to this Account; provided, however, that pursuant to this Article, the maximum level may be modified from time to time, in which event PEMBROKE PARK shall resume making monthly payments to this Account until its required contribution level is reached. In the event the balance in PEMBROKE PARK's Account shall at any time fall below the maximum prescribed level set forth herein, then at that time PEMBROKE PARK shall resume making monthly payments in accordance with this paragraph so as to bring the balance in said Account to the maximum prescribed level. Said Account shall include any unexpended monies deposited since October 1, 1988, remaining on deposit in the special renewal or replacement and improvement fund established under the Prior Agreement between the parties. Contributions to the Renewal, Replacement and Improvement Account shall earn interest at HOLLYWOOD's pooled fund interest rate, which interest shall be credited annually based on the average monthly balance in PEMBROKE PARK's Account.

(2) In the event it is necessary to renew, replace or improve an element of the HOLLYWOOD System for which sufficient funds are not available in the Renewal, Replacement and Improvement Account established for PEMBROKE PARK, HOLLYWOOD shall notify PEMBROKE PARK of the deficiency in said Account. PEMBROKE PARK shall have a period of sixty (60) days from the date of said notification to contribute any said deficiency to the Renewal, Replacement and Improvement Account. In the event PEMBROKE PARK has not made said deficiency contribution within sixty (60) days of the date of notification of the deficiency by HOLLYWOOD, HOLLYWOOD, at its option may: (i) obtain financing necessary to fund the deficiency, in which event PEMBROKE PARK shall pay the cost of said financing as additional Debt Service Charges; or (ii) HOLLYWOOD may fund the deficiency internally, in which event PEMBROKE PARK shall repay HOLLYWOOD the amount of the deficiency, plus interest at HOLLYWOOD's earned interest rate as an additional monthly charge to PEMBROKE PARK, over a period of not less than sixty (60) months and not greater than one hundred twenty (120) months.

3. Additional Capacity. At such time as financing is secured for construction of additional facilities as contemplated in Article V below, so as to service the various Large Users, or it becomes necessary for PEMBROKE PARK to secure additional transmission or treatment capacity, PEMBROKE PARK shall pay all additional Debt Service Charges based on the formulae set forth in Article IV, 2(b) hereof.

4. Payment and Penalties for Nonpayment. The parties agree that HOLLYWOOD shall bill PEMBROKE PARK for providing the services necessary for wastewater treatment, transmission and disposal, on a monthly basis in accordance with HOLLYWOOD's standard billing procedures. PEMBROKE PARK shall pay such billings within forty-five (45) days of the receipt of the monthly bill. Should a billing or a portion of the billing be outstanding for a period of more than forty-five (45) days from the date of receipt of the original billing, then PEMBROKE PARK shall be considered in default of this Agreement. Should PEMBROKE PARK not pay within the forty-five (45) day period set forth herein, PEMBROKE PARK shall pay interest on the unpaid balance at the rate of twelve percent (12%) per annum.

5. Dispute Over Amounts Billed. PEMBROKE PARK agrees that in the event of a dispute as to a billing invoice or the amount PEMBROKE PARK owes on a monthly bill, and which dispute the parties cannot resolve within forty-five (45) days from the date of receipt of the original invoice, then PEMBROKE PARK shall automatically deliver to HOLLYWOOD the total amount billed and an adjustment of the billing invoice amount, if any, shall be made subject to subsequent agreement or adjudication. The amount of such charge that is in dispute shall be held in escrow by HOLLYWOOD until the dispute is resolved, provided however, that in the event the disputed amount relates to Debt Service Charges, then HOLLYWOOD shall be entitled to apply such disputed amount to make debt service payments when due.

6. Access to Records. HOLLYWOOD agrees that it shall maintain accurate accounting records for the wastewater collection, treatment and disposal facilities, and that HOLLYWOOD will make available to PEMBROKE PARK for inspection or review said records upon reasonable advance notice (at least fifteen 15 days) and specific written request as to the records requested. Any questions or explanations necessary as to the information contained in such records shall be addressed at the Large Users' Advisory Committee meetings.

ARTICLE V. ADDITIONAL OBLIGATIONS OF THE PARTIES

1. Expansion of the Hollywood Regional Wastewater Treatment Facilities. HOLLYWOOD and PEMBROKE PARK acknowledge that the present rated capacity of the HOLLYWOOD Regional Wastewater Treatment Facilities is 38 MGD, and that subsequent to the execution of this Agreement and similar agreements between HOLLYWOOD and the other Large Users, that the HOLLYWOOD System is planned to be initially expanded to treat the total projected flow requirements for the year 1999-2000 of all Large Users, including HOLLYWOOD. In the event that any further plant expansion(s) become necessary, then the costs, including the Debt Service Charges, relating to such additional expansion(s) shall be borne by those Large Users who require said expansion(s) in proportion to their respective needs. In the event that the HOLLYWOOD System is rerated without any capital expenditure to an MGD in excess of its then current capacity by an agency with regulatory authority to rerate the capacity of the plant, then each of the Large Users, including HOLLYWOOD, shall be given credit for such increased capacity on a pro rata basis in proportion to their maximum projected reserved flows set forth in Article II, Section 6.B. hereof as adjusted or amended, as a percentage of total projected reserved flows for all Large Users into the HOLLYWOOD System at the time of rerating.

2. Cost of Expansion of the Hollywood Regional Wastewater Treatment Facilities. At such time as HOLLYWOOD, determines it is necessary, in order to respond to the needs of the Large Users utilizing the HOLLYWOOD System, to expand the

HOLLYWOOD System, HOLLYWOOD shall charge PEMBROKE PARK monthly one-twelfth (1/12) of PEMBROKE PARK's annual Debt Service Charges then due attributable to said expansion which shall be computed in accordance with the formulae set forth in Article IV, 2(b) hereof. Said Debt Service Charges will be imposed at the time that HOLLYWOOD incurs the debt.

Nothing contained herein shall obligate HOLLYWOOD to undertake financing, either by issuing wastewater system revenue bonds, or any other financial mechanism, without the cooperation of PEMBROKE PARK, and the other Large Users and PEMBROKE PARK agrees to cooperate and execute any reasonably necessary document that may be required by the credit enhancement provider, bond insurer or rating agencies in order for HOLLYWOOD to obtain the financing for the expansion contemplated herein, including, documents, representations and consents, if any, required by bond rating agencies and municipal bond insurers or credit enhancement providers in connection with obtaining a credit rating or bond insurance on the bonded obligations; provided however, that PEMBROKE PARK shall not be required to execute any document or note that creates a bonded indebtedness directly to PEMBROKE PARK.

3. PEMBROKE PARK's Obligation to Deliver Wastewater. Except as otherwise provided in Article II hereof, PEMBROKE PARK agrees that during the term of this Agreement, it shall deliver all existing, and future wastewater flows collected by it, from within its Service Area as set forth in Exhibit "B", to the HOLLYWOOD System, and HOLLYWOOD agrees to accept such wastewater

flows from PEMBROKE PARK's Service Area on the terms and conditions set forth herein.

4. PEMBROKE PARK's Cooperation. PEMBROKE PARK agrees to cooperate and execute any necessary documents to effect the agreements contained herein, and to cooperate with HOLLYWOOD under the terms of the Florida Intergovernmental Cooperation Act as may be required from time to time in furtherance of this Agreement, and PEMBROKE PARK further agrees that it shall take no action which would jeopardize the tax exempt status, pursuant to the Internal Revenue Code, as amended from time to time, of the interest on any debt now or hereafter issued to finance the HOLLYWOOD System.

5. Changes Required by Outside Agencies. Notwithstanding HOLLYWOOD's obligations with respect to treating and disposing PEMBROKE PARK's flows as provided herein, HOLLYWOOD may revise the schedule of flows set forth herein in the event any federal, state or local agency having jurisdiction promulgates rules and regulations that would affect the amount or quality of flow HOLLYWOOD can treat or dispose. In that event, the parties agree to comply with any such rule or regulation and make such amendments to this Agreement as may be necessary, provided, however, that should there be a determination by either party that the rules or regulations so promulgated are unreasonable or not binding, the parties hereto reserve the right to challenge said regulations. HOLLYWOOD and PEMBROKE PARK acknowledge that certain federal, state and local agencies have jurisdiction or control over pollution matters and, should such

agency issue legal and enforceable orders or rules that may alter any of the terms and conditions of this Agreement, there shall be no liability on either party by reason of such action, provided that HOLLYWOOD shall not be precluded from making any necessary adjustments to the sewage collection and treatment rates; provided further, that any increased costs incurred by HOLLYWOOD from any such action shall be assessed pro rata to PEMBROKE PARK based on PEMBROKE PARK's actual flows; unless said adjustments are occasioned solely by the acts of Large Users other than PEMBROKE PARK, in which case PEMBROKE PARK shall not be liable for said adjustments.

6. Adequate Rate Schedule. PEMBROKE PARK agrees that it shall establish and maintain rates and service charges or other means of obtaining funds within its Service Area which shall be sufficient to provide the monthly payments to HOLLYWOOD for the wastewater collection and treatment service contemplated herein, and such rates and charges shall be revised as may be required from time to time to provide sufficient funds to pay any sums due HOLLYWOOD under the terms of this Agreement.

ARTICLE VI. PROVISIONS RELATING TO TERMINATION OF AGREEMENT AND ASSIGNMENT OF HOLLYWOOD'S RIGHTS AND OBLIGATIONS

1. Termination Clause. Except as otherwise provided in Section 2 of this Article VI, this Contract may be terminated at any time by either participating party on one (1) years notice (or such shorter time as the parties shall mutually agree) to the other in writing by certified mail, only under the following conditions:

a. Termination by PEMBROKE PARK.

(1) Subject to subsection (3) below, PEMBROKE PARK shall pay to HOLLYWOOD in advance of termination all Debt Service Charges which would otherwise have been chargeable to PEMBROKE PARK under the terms of this Agreement (based upon a weighted average for future years using projected flows). If such Debt Service Charges can be reduced by calling bonds for redemption or otherwise providing for their payment prior to maturity under the terms of their issuance and if PEMBROKE PARK provides HOLLYWOOD with sufficient money to cover its Debt Service Charges and all expenses in connection with such call for redemption, including premiums, legal fees and costs, publication costs, and trustees and paying agents fees and mailing costs, then HOLLYWOOD shall call for redemption as many of such bonds as may be called under their terms with the money paid by PEMBROKE PARK to HOLLYWOOD. HOLLYWOOD reserves the right to determine which bonds to call.

(2) Subject to subsection (3) below, PEMBROKE PARK shall, in addition to Debt Service Charges, pay to HOLLYWOOD a sum equal to the then present value of all other

payments which, in the absence of such termination, would be made by PEMBROKE PARK to HOLLYWOOD hereunder during the period when HOLLYWOOD would receive and treat wastewater from PEMBROKE PARK, through and including five (5) years from the date of termination using PEMBROKE PARK's annual payment in the year of termination. The "then present value" as used above means the value on the termination date of the various sums payable thereafter, discounted at the then prevailing Prime interest rate plus all payments due and past due with interest at the then prevailing Prime interest rate from the date due to the termination date. In making such determination, PEMBROKE PARK shall be given full credit for all actual reductions, if any, in HOLLYWOOD's expenses of operation and maintenance, and administration which reductions are attributable to the termination of this Agreement. Hollywood shall also have an affirmative obligation to take such actions as are available in order to mitigate its expenses.

(3) There shall be deducted from the sums of the amounts payable by PEMBROKE PARK under subparagraphs (1) and (2) above any amount of liability (not in excess of said sum) assumed in writing by any other municipality, political subdivision or other entity, simultaneous with or prior to such termination if (a) capability of municipality, the political subdivision or other entity assuming such liability to satisfy the same shall be found satisfactory by HOLLYWOOD, (b) such municipality, political subdivision or other entity shall execute an agreement with HOLLYWOOD substantially the same as this Agreement, (c) whenever any revenue bonds of the CITY OF HOLLYWOOD payable in whole or in

part from sewer revenues are then outstanding which are secured by ordinance, resolution or indenture empowering a trustee or other agent on behalf of the holders of such bonds to consent to said assumption of liability, if such trustee or other agent's consent shall have been obtained in writing, and (d) PEMBROKE PARK shall execute and deliver to HOLLYWOOD, in a form acceptable to HOLLYWOOD, an agreement releasing and holding HOLLYWOOD harmless and indemnifying HOLLYWOOD from any responsibility, liability or claim for or relating to collecting and/or treating PEMBROKE PARK's wastewater from and after the date of termination of this Agreement.

b. Termination by HOLLYWOOD.

(1) There shall be a readily available alternative means of treating and disposing of the wastewater of PEMBROKE PARK which HOLLYWOOD would otherwise be required to treat and dispose of under this Agreement and such alternative means must meet all state, federal and local requirements pertaining to the public health, the pollution of public water and the protection of the environment generally.

(2) Any revenue bonds of the CITY OF HOLLYWOOD payable in whole or in part from wastewater revenues are secured by ordinance, resolution or indenture which requires a trustee or other agent for the holders of such bonds to consent to such termination on their behalf, such trustee or agent shall so consent in writing.

(3) HOLLYWOOD shall pay to PEMBROKE PARK an amount equal to the sum of (a) the actual expenses incurred by

ARTICLE VII. PROVISIONS RELATING TO DEFAULT

1. Default.

a. The parties agree that in the event either party commits an act of default under any of the terms or provisions of this Agreement, the party so defaulting shall be liable to the other party for any expenses, loss or damage occasioned by reason of such default.

b. The parties acknowledge that in order to construct the planned expansion of the HOLLYWOOD System, it is necessary for revenue bonds to be issued from time to time to provide the funding source for said expansion program and, by reason of such obligations incurred by HOLLYWOOD with regard to said bond financing, it is imperative that HOLLYWOOD be paid in a timely fashion the sums due from PEMBROKE PARK pursuant to this Agreement. In light of the obligations to the bondholders, and the acknowledgments that HOLLYWOOD has relied on PEMBROKE PARK's representation that payment of all sums due HOLLYWOOD under the terms of this Agreement shall be prompt in their remittal, the parties hereby agree to resolve disputes over monthly billings in accordance with Section 2 hereof. In the event that PEMBROKE PARK shall have committed an act of monetary default by failing to pay a monthly service bill within forty-five (45) days of receipt of said bill, then PEMBROKE PARK shall pay an interest penalty on the unpaid balance at the rate of 12% per annum and HOLLYWOOD shall have, in addition to any other rights and remedies provided for herein, the right and power, by suit, action, mandamus or other such proceedings at law or in equity,

3. Non-Monetary Default. Except as otherwise expressly provided herein, with respect to non-monetary defaults only, committed by PEMBROKE PARK, the default, if not otherwise resolved after due and diligent effort by both parties, shall be submitted to binding arbitration as set forth in paragraph 4 below.

4. Arbitration. Any non-monetary dispute between HOLLYWOOD and PEMBROKE PARK arising from this Agreement which cannot otherwise be resolved after due and diligent effort by both parties, shall be the subject of binding arbitration. Said arbitration shall be conducted by a board of three arbitrators, each of whom shall be qualified as a licensed engineer or a certified public accountant, or otherwise qualified person, and who shall not be employed by either party on a regular salaried basis. Each party to this Agreement shall choose one arbitrator, and the two so chosen shall choose a third who shall act as chairperson. The fees, charges and expenses of such arbitrators shall be borne equally by the parties hereto. PEMBROKE PARK agrees that during any such period of arbitration, it will continue to promptly make all payments due HOLLYWOOD, pursuant to the terms of this Agreement and Hollywood shall continue to provide wastewater treatment services to PEMBROKE PARK in accordance with the terms hereof.

5. Litigation and Arbitration Costs.

a. PEMBROKE PARK agrees that, to the extent legally permitted, it shall indemnify and hold HOLLYWOOD harmless from and against any and all costs or expenses incurred by HOLLYWOOD in the event of any litigation in which PEMBROKE PARK or HOLLYWOOD is or may become a party as either Plaintiff or Defendant, which results from and is determined to be caused in whole or in part from the effects of the improper introduction of materials by PEMBROKE PARK or any users of PEMBROKE PARK's System into the HOLLYWOOD System, or any portion thereof which may cause damage within or without the HOLLYWOOD System.

b. In the event of litigation between the parties to enforce the terms of this Agreement, then in that event the prevailing party shall be entitled to recover all costs and fees incurred, including but not limited to reasonable attorneys' fees.

6. Fines. In the event any fines, penalties or damages are incurred or imposed by or on HOLLYWOOD by reason of PEMBROKE PARK's violation or default of its obligations under this Agreement, then, in that event, PEMBROKE PARK shall be solely responsible for the payment of same.

7. Force Majeure. The parties agree that in the event of a temporary cessation of wastewater transmission which results from an act of God, hurricane, lightning, fire, strike, casualty, necessary maintenance work, breakdown of machinery, insurrection or riot, that said temporary cessation shall not constitute a default in this Agreement on the part of either of

the parties, and neither party shall be liable to the other for any damage resulting from such cessation, and unless written notice to the contrary is received from any federal, state or local agency, or any court having jurisdiction over the subject matter, HOLLYWOOD shall continue to accept and dispose the wastewater transmitted to it by PEMBROKE PARK if possible, regardless of the degree of treatment available and PEMBROKE PARK, during any such period of interruption or reduced treatment shall continue to pay its share of Debt Service Charges due and the actual costs incurred by HOLLYWOOD. In the event the amount of the Debt Service Charges and actual costs incurred during any period of temporary cessation cannot be determined by reason of no flow, or insufficient flow of wastewater, then the Debt Service Charges and actual costs incurred paid by PEMBROKE PARK shall be based on the twelve (12) month period prior to said interruption of service or reduced treatment.

ARTICLE VIII. ADMINISTRATION

1. Execution and Agreement. The parties hereto agree that upon execution of this Agreement by the appropriate officials of HOLLYWOOD and PEMBROKE PARK, that said Agreement shall be in full force and effect as of the date of said execution, provided that the effective date for billing purposes and calculations of amounts owed shall be as of October 1, 1988. Upon execution, this Agreement shall be filed with the official records of the Broward County Clerk's Office.

2. Large Users Advisory Committee (LUAC). The parties agree that HOLLYWOOD shall, subject to the terms contained herein, have sole and exclusive authority as to the administration, operation and maintenance of the HOLLYWOOD System, including establishment of the annual budget, establishment and amendment of service fees, rates and other charges necessary for the efficient operation and maintenance of the HOLLYWOOD System; provided however, that commencing with the charges to be paid by PEMBROKE PARK during the 1991-92 Fiscal Year and each Fiscal Year thereafter, Hollywood will consult with PEMBROKE PARK and each of the other members of the Large User's Advisory Committee on or before May 15 of each Fiscal Year with respect to establishing the proposed respective fees, rates, RR&I contributions and other charges to be paid by the Large Users in the next ensuing Fiscal Year. In addition, HOLLYWOOD shall have the obligation to meet with the Large Users Advisory Committee at least quarterly to review rate and budgeting matters and the Committee shall have the right to make recommendations to

HOLLYWOOD concerning these matters. HOLLYWOOD also agrees to meet with the Large User's Advisory Committee and discuss any plans relating to relocation of System facilities prior to any definitive action.

3. Invalidity of Provision. In the event it is determined that any section, clause, sentence, or provision of this Agreement shall be invalid, then same shall not affect the validity of any other part of this Agreement which can be given effect without such invalid part or parts. The parties agree that this Agreement shall be binding upon the successors and assigns of the parties hereto and may be enforced by appropriate action of court, or courts of competent jurisdiction.

4. Legal Requirements. The parties agree that each has complied with all necessary legal requirements for execution of this Agreement, including but not limited to due consideration of the terms and conditions hereof by the appropriate governing body of each municipality and its city attorney, and public hearing on this matter; and each party hereto agrees to exchange with the other, certified copies of any official records of its governing body authorizing the execution of this Agreement on its behalf.

5. Notice. Any notice required to be given hereunder in writing shall be considered to be properly given if the same has been sent in writing by certified or registered mail to the following:

HOLLYWOOD: City of Hollywood
2600 Hollywood Boulevard
Hollywood, FL 33021

Attention: City Utilities Director
Copy to: City Attorney

PEMBROKE PARK: _____

_____

_____

6. Prior Agreements. This document, upon its execution by both parties shall supersede any and all prior negotiations, correspondence, conversations, Large User agreements, including the Prior Agreement and any amendments thereto, or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, it is agreed by the parties that there shall be no deviation from the terms hereof which shall be predicated upon any prior representation or agreements whether oral or written, unless said are specifically provided for herein.

7. Modification, Amendment or Alteration. Except as otherwise expressly provided herein as to certain matters which only require written notice, no modification or amendment to the terms or conditions of this Agreement shall be effective unless contained in a supplemental document executed with the same formality of this Agreement and attached hereto.

8. Findings. All of the recitations contained in the preamble of this Agreement are true and correct and incorporated herein by reference.

9. Counterpart Execution. This Agreement may be executed in counterpart originals, each of which shall be deemed an original. PEMBROKE PARK shall provide HOLLYWOOD with a certified copy of PEMBROKE PARK's resolution or evidence of other such action authorizing PEMBROKE PARK to execute this Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the respective dates under each signature.

Signed, sealed and delivered
in the presence of:

Suzanne Torres

Carole Glover

HOLLYWOOD:

CITY OF HOLLYWOOD, a
Municipal Corporation of
the State of Florida

By: Sal Oliveri, Mayor

Dated: Oct. 30, 1990

Attest:

Martha S. Lambos, City Clerk

Prepared and approved as to
form and legality by:

Alan B. Koslow
City Attorney

(See prior page for additional signatures)
(Additional signatures to the Large User Wastewater Agreement between HOLLYWOOD and PEMBROKE PARK)

Approved:

Paul E. Wimberly
Finance Director

for Acting Director

Robert A. Creighton
Utilities Director

PEMBROKE PARK:
a municipal corporation of
the State of Florida

By: Bill Lyddon
BILL LYDDON
Mayor-Commissioner

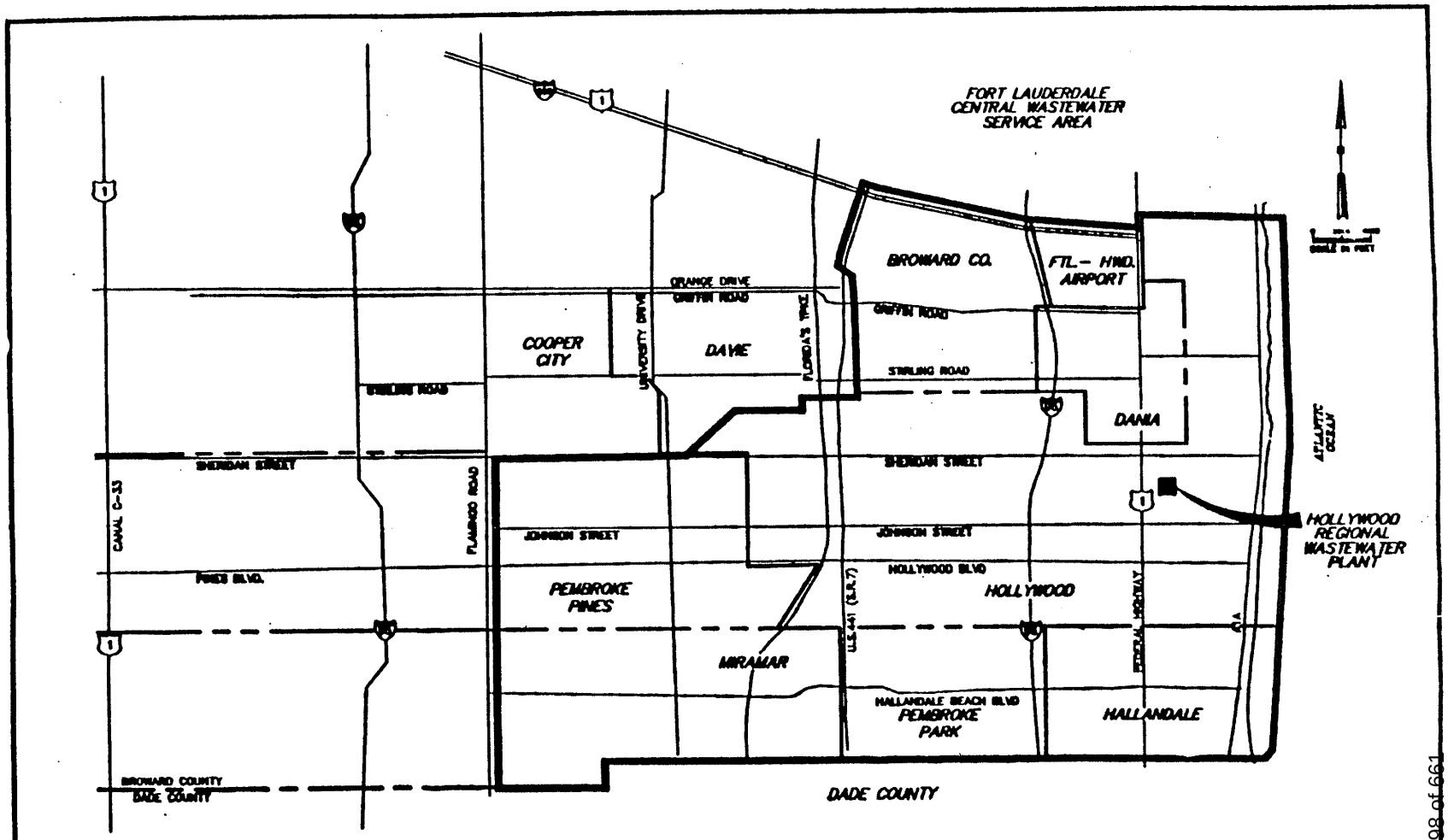
Dated: October 26, 1990

Attest: Theresa Ciummo
Clerk-Commissioner
THERESA CIUMMO

Approved as to Form and Legality:

A. J. RYAN, JR.
Town Attorney

By:_____



LEGEND

SOUTH BROWARD REGIONAL SERVICE AREA

CITY LIMITS

4840X100

SOUTH BROWARD REGIONAL SERVICE AREA

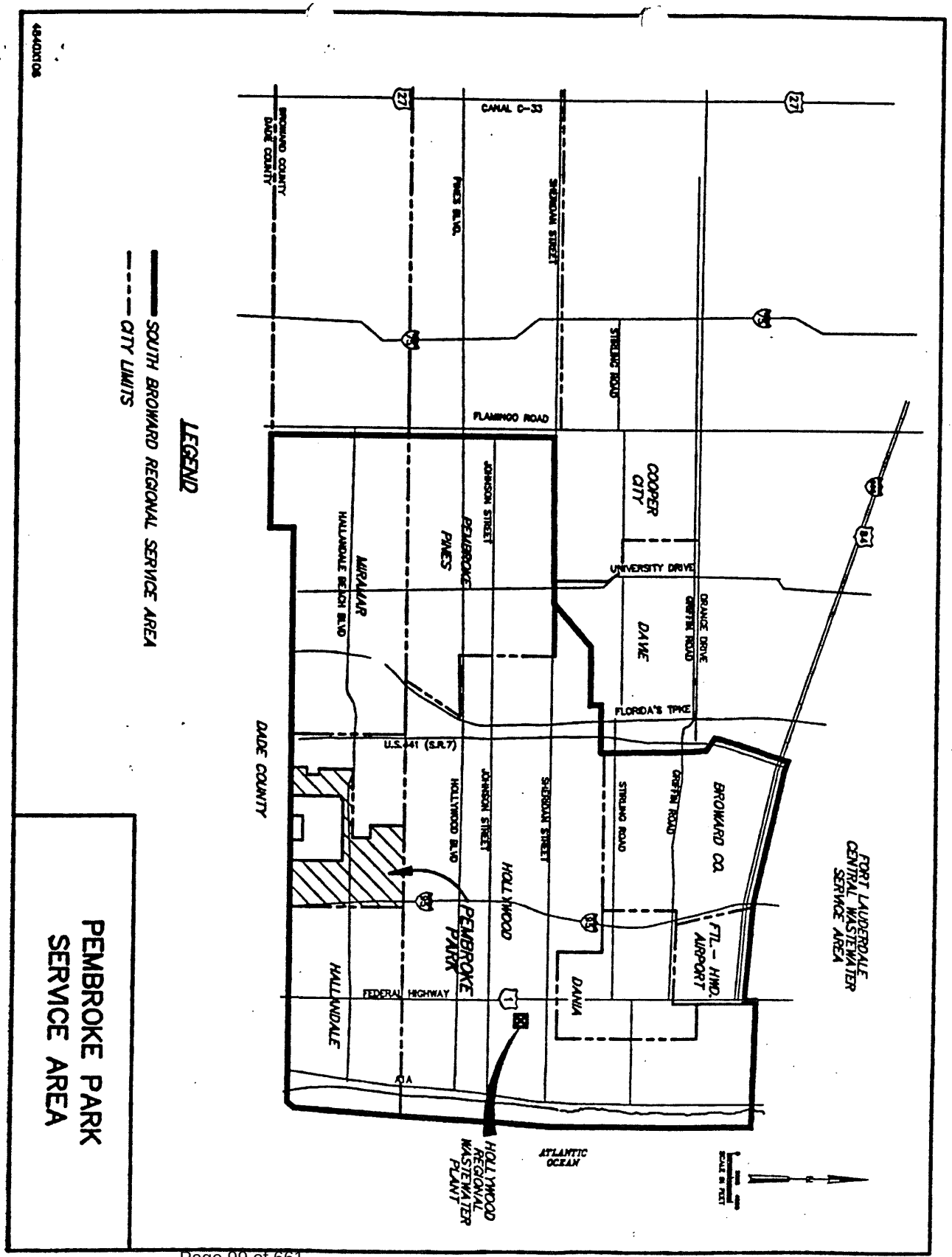

PEMBROKE PARK
SERVICE AREA
LEGEND
SOUTH BROWARD REGIONAL SERVICE AREA
CITY LIMITS
BROWARD COUNTY
DADE COUNTY
CANAL C-33
PINES BLVD.
SHERIDAN STREET
STIRLING ROAD
FLAMINGO ROAD
COOPER CITY
UNIVERSITY DRIVE
ORANGE DRIVE
GRIFFIN ROAD
DAVIE
MIRAMAR
HALLANDALE BEACH BLVD.
PEMBROKE PINES
JOHNSON STREET
FLORIDA'S TPKE.
U.S. 441 (S.R.7)
HOLLYWOOD BLVD.
HOLLYWOOD
PEMBROKE PARK
FEDERAL HIGHWAY
HALLANDALE
DANIA
BROWARD CO.
FTL. - HWD. AIRPORT
FORT LAUDERDALE CENTRAL WASTEWATER SERVICE AREA
I-95
A1A
ATLANTIC OCEAN
HOLLYWOOD REGIONAL WASTEWATER PLANT

EXHIBIT "B"

HOLLYWOOD SOUTHERN REGIONAL WWTP

LARGE USER METER AND INTERCONNECT LOCATIONS

1. HALLANDALE
   METER AT LIFT STATION E-8, 800 THREE ISLAND BLVD.
   INTER-CONNECTION AT 13TH AVENUE WASHINGTON STREET
   MANHOLE #B334N

2. HALLANDALE
   METER AT LIFT STATION E-6, 1350 FUNSTON STREET
   INTER-CONNECTION AT 14TH & JACKSON STREET, VANBUREN ALLEY
   MANHOLE B27

3. HALLANDALE
   METER AT U.S. 1 & PEMBROKE ROAD
   INTER-CONNECTION AT 19TH AVENUE & PLUNKETT STREET
   MANHOLE 401A

4. HALLANDALE
   METER AT FLETCHER STREET & 22ND AVENUE
   INTER-CONNECTION AT 23RD TAFT STREET

5. PEMBROKE PARK
   COCA COLA PLANT, PEMBROKE ROAD
   INTER-CONNECTION AT 620 S. RAINBOW
   MANHOLE 353

6. MIRAMAR SEWER PLANT
   INTER-CONNECTION AT JOHNSON STREET & 62ND AVENUE

7. PEMBROKE PINES
   METER AT N.W. 77 WAY, 13TH STREET
   INTER-CONNECTION AT TAFT STREET AND 56TH

8. DANIA
   METER AT SHERIDAN & S.E. 5TH AVENUE
   INTER-CONNECTION AT 14TH & HARDING STREET
   MANHOLE 1002

9. COOPER CITY, DAVIE (TREATED)
   METER AT COOPER CITY AND DAVIE SEWER PLANTS
   INTER-CONNECTION AT HOLLYWOOD SEWER PLANT

10. BROWARD COUNTY
    METERS: S. 40TH AVE. AT 3A WTP
            S. 40TH AVE. AT STIRLING
    INTERCONNECT: N. 56TH AVE. AT TAFT STREET

Exhibit "C" (Continued)

EXHIBIT A.1
Current Flows

EXHIBIT A.1 CURRENT FLOWS

SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT
July 2024 Large User Capacity Report (GPD)

Large User	Encumbered Flow*	Annual Average Daily Flow / Last 12 Months	Total Flow AADF + Enc.	Capacity** Allocations	% of Cap Used	% of Cap Used or Encumbered	Available Capacity
Broward County	756,117	3,877,153	4,633,270	5,883,000	65.90%	78.76%	1,249,730
Dania Beach	2,254,105	3,928,288	6,182,393	5,217,000	75.30%	118.50%	-965,393
Hallandale Beach	1,819,158	7,751,430	9,570,588	8,713,500	88.96%	109.84%	-857,088
Hollywood	1,387,989	18,754,011	20,142,000	21,811,500	85.98%	92.35%	1,669,500
Miramar ***	0	26,449	26,449	1,665,000	1.59%	1.59%	1,638,551
Pembroke Park	258,543	950,309	1,208,852	1,110,000	85.61%	108.91%	-98,852
Pembroke Pines	256,970	7,819,359	8,076,329	11,100,000	70.44%	72.76%	3,023,671
Total	6,732,881	43,107,000	49,839,881	55,500,000			5,660,119

WWTP AADF	**43.1**
Encumbered Flow	**6.7**
Total MGD	**49.8**

* Encumbered flows updated to reflect most recent activity

** 9/30/2012 Plant Capacity Officially Rated at 55.5 MGD

***Miramar Discontinued Monthly Flows to the SRWWTP on 01/10/2011 per Signed Agreement but open their interconnect as an emergency measure.

Updated 8/13/2024

EXHIBIT B
Broward County Interlocal Agreement

See Town Clerk for Resolution

(Resolution Passed Approx. 2003 – 2005)

EXHIBIT C
Coca Cola Rate Agreement

See Town Clerk for Agreement

EXHIBIT C.1
REDUCTION IN VOLUME BASED ON PRODUCTION DISTRIBUTION

See Town Clerk for Agreement

(RESOLUTION PASSED APPROX. 2010)

EXHIBIT C.2
CITY OF HOLLYWOOD EXCESSIVE WASTEWATER PH AND ACIDITY CONCENTRATION

See Town Clerk for Agreement

(RESOLUTION PASSED APPROX. 1996)

EXHIBIT D

MODEL DATA REPORT 2025 EXISTING CONDITIONS

EXHIBIT D.1
GRAVITY SEWER DATA TABLE REPORT

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.91	138.37	157.5	Vitrified Clay
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	3.42	536.17	346.58	154.7	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	PVC
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.33	247.26	147.8	Vitrified Clay
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	2.8	438.06	302.61	144.8	Vitrified Clay
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	2.08	326.45	298.52	109.4	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	2.08	326.45	303.48	107.6	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.64	224.95	106.5	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	1.95	305.93	297.54	102.8	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	2.36	334.06	325.59	102.6	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.05	297.81	101.4	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.32	363.07	362.33	100.2	
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	2.65	360.43	364.07	99	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.83	494.45	91.6	PVC
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	2.45	287.75	342.94	83.9	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.33	454.36	80.4	PVC
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.44	618.26	775.54	79.7	Vitrified Clay
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.87	723.71	912.44	79.3	Vitrified Clay
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.24	349.46	73	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.65	296.91	72	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.13	492.86	692.29	71.2	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.13	307.09	69.4	Vitrified Clay
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.87	452.17	58.4	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	Vitrified Clay
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	204.57	370.12	55.3	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.15	178.63	329.9	54.1	Vitrified Clay
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.17	405.47	751.26	54	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.55	299.18	53.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.69	212.41	53.1	PVC
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.41	197.08	372.16	53	Vitrified Clay
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	168.66	322.05	52.4	Vitrified Clay
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.09	162.43	327.87	49.5	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.4	405.47	856.88	47.3	Vitrified Clay
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	Vitrified Clay
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	2.68	179.44	442.87	40.5	
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.17	344.92	40.3	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.15	558.68	40.3	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.633	192.58	39.8	Vitrified Clay
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.85	299.16	39.1	Vitrified Clay
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.15	288.2	38.6	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136.04	357.52	38.1	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.76	414.13	37.9	PVC
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.25	296.6	36.5	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.53	465.9	34.9	Vitrified Clay
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.33	1067.6	34.2	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.167	128.33	33.6	
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.006	6	0.013	2.03	64.5	200.89	32.1	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.91	479.4	31.1	PVC
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	2.51	136.8	446.82	30.6	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.39	449.63	28.3	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	PVC
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.51	405.47	1443.4	28.1	Vitrified Clay
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	2.02	102.6	370.1	27.7	PVC
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.22	397.39	27.2	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	102.99	380.57	27.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	2.88	142.45	533.77	26.7	Vitrified Clay
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	1.84	88.999	343.16	25.9	Vitrified Clay
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	2.87	136.8	538.07	25.4	PVC
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.84	413.76	25.3	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.45	1071.6	25.2	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.55	488.56	23.9	PVC
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.033	300.43	22.6	Vitrified Clay
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.35	102.6	454.91	22.6	PVC
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.361	410.39	22.3	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.673	399.19	22.2	PVC
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.533	184.22	21.5	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.32	857.64	21.4	
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.036	12	0.012	7.36	694	3269.3	21.2	Ductile Iron
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.333	272.74	20.7	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	PVC
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	2.01	46.17	225.16	20.5	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.078	434.47	20.3	PVC
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	1.79	72.577	358.04	20.3	Vitrified Clay
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.078	436.66	20.2	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.493	236.19	20.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.012	433.85	19.1	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.078	465.75	18.9	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.078	468.18	18.8	PVC
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.94	41.445	223.47	18.5	PVC
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.508	395.17	18.3	PVC
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	4.8	405.47	2230.1	18.2	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.15	79.8	444.28	18	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.633	379.78	17.3	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.649	441.38	17.1	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A4	0.2	162.3	0.003	8	0.01	1.88	67.499	395.19	17.1	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A2	-0.7	102.4	0.004	8	0.01	0.49	76.004	446.05	17	PVC
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.324	358.4	16.6	
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	2.08	71.25	444.4	16	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.119	619.43	15.8	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	2.92	98.119	628.94	15.6	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A3	-0.3	112.6	0.004	8	0.01	2.07	69.074	445.71	15.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.174	492.39	15.5	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	1.67	55.575	362.32	15.3	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.072	522.31	15.3	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	PVC
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	1.53	49.777	335.02	14.9	Vitrified Clay
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.344	399.96	14.1	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.743	435.71	13.7	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A5	0.7	121.8	0.004	8	0.01	2.04	61.199	460.67	13.3	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A1	0.4	95.8	-0.011	8	0.013	0.49	76.004	575.97	13.2	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.365	171.88	13	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.59	864.45	12.7	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.812	724.35	12.5	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.73	3804.2	12.5	
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.733	182.79	12.4	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A7	1.7	100.8	0.004	8	0.01	1.95	54.899	449.6	12.2	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.185	465.32	12.1	PVC
1510	O2L18ASA7	M18A-A7	1.7	M18A-A6	1.2	120	0.004	8	0.01	2	55.844	464.08	12	PVC
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	1.81	49.777	421.82	11.8	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.693	465.86	11.5	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	PVC
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.913	847.57	10.8	Vitrified Clay
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.003	8	0.013	1.15	29.802	276.67	10.8	
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.38	19.71	186.47	10.6	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	1.25	31.35	302.71	10.4	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.198	452.36	10.2	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	1.24	17.19	169.58	10.1	Vitrified Clay
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.041	446.39	10.1	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.041	451.18	10	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.831	482.4	9.9	PVC
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.711	348.09	9.1	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86.002	952.5	9	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.699	500.45	8.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.029	1041.2	8.8	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.853	465.5	8.8	PVC
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	Vitrified Clay
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	1.18	14.67	169.64	8.6	Vitrified Clay
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.365	260.6	8.6	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.916	445.75	8.5	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.475	1150.3	8.3	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.174	923.17	8.3	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.331	843.1	8.2	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.839	1019.8	8.2	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.097	355.25	8.2	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	Vitrified Clay
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	0.617	10	0.013	18.16	628.09	7726.2	8.1	
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.625	295.15	8	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.545	169.51	8	Vitrified Clay
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	0.953	13.8	0.012	29.8	1913.6	24545	7.8	Ductile Iron
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	Vitrified Clay
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.896	311.19	7.4	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.072	450.33	7.3	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.938	630.08	7.3	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	1.11	12.15	169.28	7.2	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.432	480.46	7.2	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.475	1378.3	6.9	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.201	410.79	6.9	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	Vitrified Clay
4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.805	204.55	6.7	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	1.08	19.95	296.94	6.7	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.739	371.09	6.7	
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.462	371.41	6.6	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	5.59	224.49	3518.3	6.4	
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.068	500.5	6.2	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.711	512.97	6.2	PVC
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	5.03	136.8	2218.4	6.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.501	511.59	6.2	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.205	581.9	5.9	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.516	455.56	5.8	PVC
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.66	27.585	476.76	5.8	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.55	2339.4	5.8	Vitrified Clay
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.396	480.62	5.5	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.915	1480.9	5.3	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.058	343.39	5.3	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.236	527.58	5.2	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.217	1150	5.1	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.385	343.06	5.1	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	
848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	1.14	17.1	342.84	5	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	PVC
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.338	493.11	4.7	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.43	2756.8	4.5	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	1.42	19.95	442.78	4.5	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.946	451.2	4.4	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.528	2054.1	4.4	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.368	556.67	4.4	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.482	494.65	4.3	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.7333	181.57	4.3	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.127	404.83	4.2	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.962	356.87	4.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	1.08	14.25	341.52	4.2	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.545	333.55	4.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41.003	1030.2	4	
860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	Vitrified Clay
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.115	287.73	3.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.255	321.66	3.8	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	1.38	17.1	450.68	3.8	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.788	875.9	3.7	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.517	465.42	3.5	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.767	505.55	3.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.435	439.69	3.5	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.237	553.53	3.5	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.901	442.9	3.4	PVC
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.115	334.02	3.3	Vitrified Clay
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.545	320.92	3.3	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.618	416.54	3.3	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.388	506.06	3.2	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	1.3	14.25	446.3	3.2	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.901	467.13	3.2	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.007	6	0.019	0.72	4.41	139.01	3.2	
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.574	428.51	3.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.978	351.02	3.1	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.005	8	0.01	1.4	15.116	484.91	3.1	PVC
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.0375	194.22	3.1	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.127	554.7	3.1	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.662	443.97	3.1	PVC
3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.347	435.75	3.1	PVC
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.7725	230.02	2.9	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.636	709.15	2.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.115	494.2	2.9	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.912	1283.3	2.7	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.175	527.71	2.7	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.802	1147.1	2.6	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.9	8.55	330.07	2.6	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.915	501.36	2.6	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.625	670.63	2.5	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.81	4.135	169.18	2.4	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	Vitrified Clay
673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.901	619.99	2.4	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.805	574.73	2.4	PVC
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.703	669.54	2.3	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.741	463.16	2.3	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.154	530.84	2.3	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.529	1953.9	2.3	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.604	1009.7	2.2	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	2.67	22.8	1025.4	2.2	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.427	470.36	2.2	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.427	471.99	2.2	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.913	864.78	2.2	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.6125	359.79	2.1	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.5625	314.43	2.1	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.255	591.62	2.1	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	Vitrified Clay
788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.1235	303.34	2	Vitrified Clay
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	PVC
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.555	1198.8	2	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.8225	248.74	1.9	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.8737	458.56	1.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.74	5.7	298.04	1.9	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	1.11	8.55	448.05	1.9	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.6771	455.49	1.9	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.0769	341.53	1.8	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.901	837.85	1.8	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.6225	205.41	1.8	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.041	2631.4	1.7	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.3125	487.09	1.7	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.417	2030.2	1.7	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.8517	465.33	1.7	PVC
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	Vitrified Clay
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.5542	470.5	1.6	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	1.05	7.125	444.74	1.6	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.688	1231.2	1.6	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.7375	431.72	1.6	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.396	1782.6	1.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.759	4904.3	1.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.321	1008.4	1.4	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.9925	224.99	1.3	Vitrified Clay
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.795	1873.1	1.3	PVC
1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76.004	5961.7	1.3	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.3625	186.95	1.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.4567	827	1.1	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.4792	222.53	1.1	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.938	1252.3	1.1	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.97	11.4	1025.7	1.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.7917	342.43	1.1	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	Vitrified Clay
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	Vitrified Clay
3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.2208	497.45	1	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A6	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.252	4982.7	1	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.5675	477.36	1	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.3337	350.8	1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.88	3.99	446.55	0.9	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.5675	516.97	0.9	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	Vitrified Clay
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	0.74	3.15	386.07	0.8	
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.7198	975.16	0.8	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.5625	451.05	0.8	PVC
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	Vitrified Clay
1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.0875	1048.7	0.7	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.1375	341.77	0.6	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A10	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.0417	349.5	0.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.3333	404.28	0.6	
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	PVC
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.0475	361.35	0.6	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	1.55	2.85	508.53	0.6	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.974	3305.6	0.5	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.8583	560.08	0.5	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.8583	581.84	0.5	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.625	12469	0.5	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.0883	471.24	0.4	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.0883	476.91	0.4	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	Vitrified Clay
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	Vitrified Clay
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A3	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.3168	823.44	0.4	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.2625	70.459	0.4	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.2625	73.273	0.4	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	PVC
566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.5799	475.18	0.3	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	Vitrified Clay
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	0.47	1.0417	317.28	0.3	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.7875	256.41	0.3	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.0417	687.31	0.3	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	1.66	3.465	1177.4	0.3	PVC
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.255	8266.1	0.3	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.2417	2221.4	0.3	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.46667	174.81	0.3	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	Vitrified Clay
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.0442	423.66	0.2	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.0442	451.48	0.2	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.2625	120.45	0.2	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	Vitrified Clay
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0.01	1.285	652.28	0.2	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.7875	466.92	0.2	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.7125	432.09	0.2	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.2625	171.43	0.2	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A5	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.8292	2162.4	0.1	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.2625	202.47	0.1	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.2625	280.02	0.1	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.2625	343.6	0.1	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.2625	358.36	0.1	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.2625	429.13	0.1	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.0442	2376.2	0	PVC
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.2625	2474.3	0	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	0	0	266.59	0	Vitrified Clay
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	PVC

EXHIBIT D.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
359	M3A1	6.4	6.4	8964	-1.8	356.9	6.225	363.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.7	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1914	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	536.2	0	536.17	1.17	-2.4	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.12	1.995	98.119	0.76	-2.3	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.62	25.3	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.313	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.888	2.888	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.3	22.05	365.33	0.71	-1.2	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	2.27	1.8	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.5	17.1	159.55	1.66	2.1	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	1.4	3.5	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94	11.4	105.4	0.81	3.6	FALSE	TRUE
1107	M14C4	6.2	6.2	5582.01	-1.4	302.1	3.876	305.93	2.24	0.9	FALSE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	305.9	20.52	326.45	2.19	-0.1	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	326.5	0	326.45	2.18	-0.2	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	438.1	0	438.06	2.12	-0.6	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	1.48	2	FALSE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	1.08	2.1	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.39	4.782	76.174	1.41	-0.2	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	0.78	2.1	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.08	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.044	1.0442	0.02	5	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.5	2.363	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.96	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634	11.16	645.2	0.78	-3.6	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.94	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.62	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.64	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.317	3.3168	0.04	0	FALSE	TRUE
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.738	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.334	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.467	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.69	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.63	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.3	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.263	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.263	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4266	M37A5	5	5	1503.6	3	0	1.044	1.0442	0.02	3	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.993	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.81	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	0.04	4.9	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
67	M17A9	8.5	8.5	16416	0	349	11.4	360.43	0.54	0.5	FALSE	FALSE
68	M17J1	8.8	8.8	16416	3.7	3.563	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.713	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	196.9	7.695	204.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.13	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.3	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.19	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	162	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.6	14.38	694	0.53	-4.1	FALSE	FALSE
530	M14A1	6.3	6.3	0	-4	628.1	0	628.09	0.53	-3.4	FALSE	FALSE
534	M14A3	5.9	5.9	0	-2.6	98.12	0	98.119	0.24	-2.4	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.93	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.53	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.73	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.13	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.733	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.63	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.313	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.313	8.313	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.16	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.51	16.16	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.67	16.16	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.8	7.852	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.31	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.457	9.457	18.913	0.09	2.3	FALSE	FALSE
632	M36H1	8.8	8.8	11306.4	3	15.7	7.852	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.852	7.852	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.852	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.34	16.16	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.457	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.9	7.852	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.6	53.1	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.8	35.03	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.33	10.74	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.22	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.74	10.74	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.74	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.37	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.8	0	29.802	0.15	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
674	M36B6	5.7	5.7	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.9	0	14.901	0.08	2.1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
677	M36B3	6.4	8.3	3439.8	-0.1	70.8	2.389	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.08	1.523	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.03	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.07	10.74	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.8	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.9	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	405.5	0	405.47	0.4	-1.7	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.04	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.04	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.92	7.125	45.041	0.14	1.9	FALSE	FALSE
700	M17L4	7.6	7.6	16416	2.3	26.52	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.12	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.12	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	166.7	1.995	168.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	2.71	1.425	4.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	1.285	1.285	6.93	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	176.1	2.565	178.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.55	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.4	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.792	3.7917	0.05	3.6	FALSE	FALSE
900	M23B1	5.4	5.4	56700	1.9	3.792	39.38	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.333	2.3333	0.04	2.2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	22.23	5.355	27.585	0.11	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	38.3	3.15	41.445	0.15	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	17.19	2.52	19.71	0.11	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	14.67	2.52	17.19	0.11	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	12.15	2.52	14.67	0.1	1.9	FALSE	FALSE
929	M5A8	6.3	6.3	4082.4	3.1	0.315	11.84	12.15	0.09	3.2	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.33	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.623	3.15	6.7725	0.06	3.1	FALSE	FALSE
966	M4G2	7.4	7.4	907.2	5.4	2.993	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.838	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.838	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.7	9.562	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.413	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.263	2.888	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.263	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.263	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.3	0	365.33	0.43	-1.6	FALSE	FALSE
999	M34A4	4.1	4.1	0	-3	365.3	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.042	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	491	1.889	492.86	0.64	-5.8	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	405.5	0	405.47	0.4	-3	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	618.3	0	618.26	0.67	-6	FALSE	FALSE
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE
1056	M17A1	8.6	8.6	41040	-7	695.2	28.5	723.71	0.65	-6.3	FALSE	FALSE
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.17	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.54	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.39	2.85	19.237	0.09	2.6	FALSE	FALSE
1080	M17A10	8.7	8.7	6156	0.6	329.8	4.275	334.06	0.56	1.1	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1086	M17A12	9.4	9.4	80028	4	0	55.58	55.575	0.18	4.2	FALSE	FALSE
1087	M17A11	8.9	8.9	32832	1.6	265	22.8	287.75	0.47	2	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1101	M14D2	4.9	4.9	16416	1.3	131.1	11.4	142.45	2.14	3.4	FALSE	FALSE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	0.13	3.6	FALSE	FALSE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	0.3	2.1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	0.12	2.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.04	-1.9	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.58	5.415	88.999	0.23	-2.1	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.63	15.28	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.63	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.17	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.97	3.42	17.385	0.24	-0.2	FALSE	FALSE
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.51	1.425	27.93	0.13	0.5	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.96	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.713	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.713	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.83	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	197.1	27.42	224.49	0.29	-1.1	FALSE	FALSE
1270	M22F1	4.7	4.7	0	-1.8	0	0	0	1.26	-0.5	FALSE	FALSE
1274	M22A2	4.8	4.8	20412	-0.8	182.9	14.18	197.08	0.34	-0.4	FALSE	FALSE
1276	M22B1	6.2	6.2	3628.8	1.2	0.945	2.52	3.465	0.04	1.2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	162.4	17.01	179.44	0.3	1.2	FALSE	FALSE
1284	M22A5	5.4	5.4	4536	2.2	0	3.15	3.15	0.04	2.2	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.03	0	FALSE	FALSE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	0.33	2.1	FALSE	FALSE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	0.08	2.6	FALSE	FALSE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	0.06	3.2	FALSE	FALSE
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	0.1	2.5	FALSE	FALSE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	0.06	3.3	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.53	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.08	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.08	0	88.078	0.1	1.6	FALSE	FALSE
1330	M40A4	7.5	7.5	0	2.7	88.08	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.98	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.258	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	236	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.71	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.96	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.568	4.306	8.8737	0.06	2.8	FALSE	FALSE
1359	M16A8	6.1	6.1	0	3.5	4.568	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.788	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.788	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.048	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.048	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.66	1.044	44.699	0.14	-0.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1370	M37A3	5.4	5.4	4510.8	-1.6	44.7	3.133	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.088	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.76	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.309	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.088	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.088	3.133	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.044	1.0442	0.02	-0.4	FALSE	FALSE
1393	M17B1	8.8	8.8	0	2.2	136.8	0	136.8	0.24	2.4	FALSE	FALSE
1395	M17B2	9	9	0	2.6	136.8	0	136.8	0.26	2.8	FALSE	FALSE
1397	M17B3	8	8	32832	3.4	114	22.8	136.8	0.26	3.7	FALSE	FALSE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	0.07	3.8	FALSE	FALSE
1401	M17B4	8.1	8.1	0	4	102.6	0	102.6	0.44	4.5	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	91.2	11.4	102.6	0.22	4.9	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.07	5	FALSE	FALSE
1407	M17B6	7.7	7.7	16416	5.6	68.4	11.4	79.8	0.19	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.27	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.042	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.74	0	59.743	0.17	-1	FALSE	FALSE
1426	M32C1	5.7	5.7	0	0	13.81	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.07	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.54	8.531	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.52	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.67	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.21	19.49	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.48	38.95	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.34	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.77	5.571	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.72	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.263	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.1	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.1	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.088	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.5	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.83	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.25	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.9	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.32	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.4	8.021	34.417	0.11	-0.9	FALSE	FALSE
1521	M34C2	7.1	7.1	0	-0.3	26.4	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.6	3.792	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.604	22.604	0.1	3	FALSE	FALSE
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.21	5.59	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.43	0	10.427	0.07	2.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1536	M34B3	5.7	5.7	2520	2.9	8.677	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.58	7.097	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.58	1.5799	0.03	4.3	FALSE	FALSE
1550	M17F1	9.1	9.1	32832	2.8	49.78	22.8	72.577	0.2	3	FALSE	FALSE
1552	M17F2	8.9	8.9	0	3.9	49.78	0	49.777	0.17	4.1	FALSE	FALSE
1554	M17F3	10.9	10.9	70178.4	4	1.042	48.74	49.777	0.15	4.2	FALSE	FALSE
1556	M17F4	10	10	1500	5.2	0	1.042	1.0417	0.03	5.2	FALSE	FALSE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	0.46	3.4	FALSE	FALSE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	0.1	3.5	FALSE	FALSE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	0.09	3.9	FALSE	FALSE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.09	4.3	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.05	2.858	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.18	5.717	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.48	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.38	8.094	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.554	16.91	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.554	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.71	31.21	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.077	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.077	6.077	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.87	6.077	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.12	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1695	M38A5	4.9	4.9	18901.68	-2.1	19.95	13.13	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.07	13.13	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.2	13.13	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.3	27.07	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.94	27.07	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.3	13.95	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.24	13.62	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.62	13.62	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.3	10.73	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.829	3.471	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.858	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.242	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.242	8.079	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.858	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.829	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.72	10.05	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	23	1.26	24.255	0.09	-1.5	FALSE	FALSE
3102	M34G1	5.2	5.2	68390	3.8	0	47.49	47.493	0.16	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.878	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.263	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.263	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.263	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.888	2.888	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.263	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.33	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.59	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.84	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.47	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.98	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.11	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.5	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.46	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.35	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.03	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.8	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.01	6.878	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.83	17.18	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.43	34.432	0.13	2.1	FALSE	FALSE
3642	M18A-A1	5.1	5.1	0	-1	76	0	76.004	0.17	-0.8	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3682	M22A4	5.5	5.5	0	1.6	162.4	0	162.43	0.33	1.9	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.334	4.996	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.467	2.013	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.94	49.61	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.63	23.63	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	43.97	2.205	46.17	0.16	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.37	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.9	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.263	2.363	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.13	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.86	10.13	102.99	0.24	0.1	FALSE	FALSE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	0.07	3.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	405.5	0	405.47	0.59	-5.8	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	405.5	0	405.47	0.52	-5.2	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.66	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.29	12.24	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT D.3
FORCE MAIN DATA TABLE REPORT

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB2	PMP-18A-b	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA2	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
1791	O2L26FB1	W-26	PMP-26B	PVC	0.1	7.7	20	0.01	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA1	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
435	O2L18A-FA2	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
436	O2L18A-FA1	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3651	O2L34BYEPA	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

EXHIBIT D.4
PRESSURE NODE DATA TABLE REPORT

Model Pressure Node Data Table 2025 Existing Conditions
Exhibit D4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 2025 Existing Conditions
Exhibit D4

3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE

Model Pressure Node Data Table 2025 Existing Conditions
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1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT D.5.
PUMP DATA TABLE REPORT

Model Pump Data Table 2025 Existing Conditions
Exhibit D5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Table 2025 Existing Conditions
Exhibit D5

49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9

Model Pump Data Table 2025 Existing Conditions
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64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
482	PMP4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT D.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 2025 Existing Conditions
Exhibt D6

ID	Label	Elev (Grd) (ft)	Elev (Invt) (ft)	Boundary Condition Type	Elev (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1019.9	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday in August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3723.9	Measured 10 psi or 23 feet of Head on Monday 6/12/2023

EXHIBIT E.1
Gravity Sewer Date Table Report

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	4.22	660.86	346.58	190.7	93.6	Vitrified Clay
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	3.59	562.74	302.61	186	100	Vitrified Clay
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.91	138.37	157.5	92.2	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	92.2	PVC
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	2.88	451.14	298.52	151.1	100	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	2.88	451.14	303.48	148.7	100	Vitrified Clay
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.33	247.26	147.8	82	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	2.75	430.62	297.54	144.7	100	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	2.77	434.53	325.59	133.5	100	Vitrified Clay
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	2.94	460.89	364.07	126.6	86.1	Vitrified Clay
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	2.48	388.21	342.94	113.2	100	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.64	224.95	106.5	75	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.05	297.81	101.4	100	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.32	363.07	362.33	100.2	81.9	
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.71	362.49	372.16	97.4	71.8	Vitrified Clay
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.5	718.72	775.54	92.7	72.9	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.83	494.45	91.6	73.4	PVC
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.93	824.17	912.44	90.3	64.2	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.21	593.32	692.29	85.7	73.9	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.33	454.36	80.4	84	PVC
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.29	244.36	327.87	74.5	59.8	Vitrified Clay
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.24	349.46	73	81.7	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.65	296.91	72	80.4	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.13	307.09	69.4	62.1	Vitrified Clay
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.29	505.93	751.26	67.3	64	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.53	505.93	856.88	59	70.4	Vitrified Clay
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	2.94	261.37	442.87	59	67.5	
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.87	452.17	58.4	59.8	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	53.2	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	53.6	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	204.57	370.12	55.3	77	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	52	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.15	178.63	329.9	54.1	53.2	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.55	299.18	53.3	100	Vitrified Clay
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.69	212.41	53.1	45.9	PVC
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	168.66	322.05	52.4	51.9	Vitrified Clay
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	50.2	Vitrified Clay
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.17	344.92	40.3	72.1	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.15	558.68	40.3	42.5	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	43.4	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.633	192.58	39.8	36.6	Vitrified Clay
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.85	299.16	39.1	100	Vitrified Clay
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	2.67	173.14	446.82	38.7	92	PVC
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.15	288.2	38.6	100	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136.04	357.52	38.1	43.5	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.76	414.13	37.9	53.7	PVC
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	2.19	138.94	370.1	37.5	40.6	PVC
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.25	296.6	36.5	100	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	100	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	42.6	Vitrified Clay
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.73	505.93	1443.4	35.1	42.8	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.53	465.9	34.9	46.7	Vitrified Clay
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.33	1067.6	34.2	66	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.167	128.33	33.6	31.1	
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	3.06	173.14	538.07	32.2	63.7	PVC
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.006	6	0.013	2.03	64.5	200.89	32.1	38.3	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.91	479.4	31.1	41.4	PVC
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.55	138.94	454.91	30.5	55.6	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.39	449.63	28.3	36.7	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	40.5	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	1.96	101.08	358.04	28.2	78.9	Vitrified Clay
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.22	397.39	27.2	45.3	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	102.99	380.57	27.1	34.9	Vitrified Clay
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	0.91	142.45	533.77	26.7	100	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.38	116.14	444.28	26.1	36.9	PVC
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	1.84	88.999	343.16	25.9	97.8	Vitrified Clay
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.84	413.76	25.3	43	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.45	1071.6	25.2	37.8	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	1.92	91.2	362.32	25.2	32.7	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.55	488.56	23.9	34.3	PVC
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	1.74	78.277	335.02	23.4	45.4	Vitrified Clay
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	5.12	505.93	2230.1	22.7	52.4	Vitrified Clay
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.033	300.43	22.6	69.4	Vitrified Clay
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.361	410.39	22.3	33.8	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.673	399.19	22.2	33.2	PVC
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	1.97	85.088	386.07	22	48.1	
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.533	184.22	21.5	33.3	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.32	857.64	21.4	100	
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.036	12	0.012	7.36	694	3269.3	21.2	69.1	Ductile Iron
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.333	272.74	20.7	36.3	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	45.6	PVC
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	2.01	46.17	225.16	20.5	31.2	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.078	434.47	20.3	30.5	PVC
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.078	436.66	20.2	30.5	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.493	236.19	20.1	66.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.012	433.85	19.1	29.6	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	29.8	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.078	465.75	18.9	30	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.078	468.18	18.8	33.8	PVC
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	30.3	

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	2.06	78.277	421.82	18.6	31.1	Vitrified Clay
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.94	41.445	223.47	18.5	30.8	PVC
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.508	395.17	18.3	30.6	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	28.8	
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	100	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.633	379.78	17.3	28.6	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.649	441.38	17.1	28.6	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A	0.2	162.3	0.003	8	0.01	1.88	67.499	395.19	17.1	55.5	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A	-0.7	102.4	0.004	8	0.01	0.49	76.004	446.05	17	100	PVC
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.324	358.4	16.6	32.2	
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	0.45	71.25	444.4	16	100	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.119	619.43	15.8	100	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	50.5	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	0.63	98.119	628.94	15.6	100	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A	-0.3	112.6	0.004	8	0.01	2.07	69.074	445.71	15.5	91.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.174	492.39	15.5	64.2	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.072	522.31	15.3	30.1	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	29	PVC
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	26.8	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.344	399.96	14.1	27.2	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.743	435.71	13.7	25	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A	0.7	121.8	0.004	8	0.01	2.04	61.199	460.67	13.3	26.6	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A	0.4	95.8	-0.011	8	0.013	0.49	76.004	575.97	13.2	64.1	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.365	171.88	13	23.1	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.59	864.45	12.7	67.1	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.812	724.35	12.5	43	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.73	3804.2	12.5	71.6	
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.733	182.79	12.4	27.6	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A	1.7	100.8	0.004	8	0.01	1.95	54.899	449.6	12.2	24	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.185	465.32	12.1	23.8	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1510	O2L18ASA7	M18A-A7	1.7	M18A-A	1.2	120	0.004	8	0.01	2	55.844	464.08	12	24.7	PVC
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	23.1	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	24.4	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.693	465.86	11.5	30.1	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	28.5	PVC
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	6.58	389.91	3518.3	11.1	31.1	
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	31.7	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	22.1	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.913	847.57	10.8	46.6	Vitrified Clay
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.003	8	0.013	1.15	29.802	276.67	10.8	19.8	
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	100	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.38	19.71	186.47	10.6	22.2	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	25.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	28.7	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	0.2	31.35	302.71	10.4	100	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	21.7	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.198	452.36	10.2	21.8	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	1.24	17.19	169.58	10.1	21.7	Vitrified Clay
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.041	446.39	10.1	21.5	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.041	451.18	10	21.5	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.831	482.4	9.9	23.3	PVC
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	0.617	10	0.013	19.16	752.77	7726.2	9.7	84.9	
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	1.27	29.542	317.28	9.3	24.9	Vitrified Clay
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.711	348.09	9.1	21.7	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86.002	952.5	9	19.1	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	21.7	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.699	500.45	8.9	21.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.029	1041.2	8.8	65.6	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.853	465.5	8.8	20.3	PVC
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	82.2	Vitrified Clay

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	1.18	14.67	169.64	8.6	20.7	Vitrified Clay
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.365	260.6	8.6	26.5	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.916	445.75	8.5	20.7	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	20.3	Vitrified Clay
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.475	1150.3	8.3	25.7	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	24.4	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.174	923.17	8.3	62	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.331	843.1	8.2	28	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.839	1019.8	8.2	20.1	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.097	355.25	8.2	19.7	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	41.9	Vitrified Clay
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.625	295.15	8	26	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.545	169.51	8	21.7	Vitrified Clay
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	0.71	173.14	2218.4	7.8	100	PVC
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	0.953	14	0.012	29.8	1913.6	24545	7.8	87.2	Ductile Iron
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	19	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	20.2	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	19	Vitrified Clay
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	4.39	86.94	1177.4	7.4	55	PVC
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.896	311.19	7.4	17.7	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.072	450.33	7.3	18.4	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.938	630.08	7.3	23.4	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	70.1	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	1.11	12.15	169.28	7.2	19	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	21.6	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.432	480.46	7.2	24.3	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	30.3	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.475	1378.3	6.9	22.8	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.201	410.79	6.9	22.7	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	21.1	Vitrified Clay

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.805	204.55	6.7	17.3	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	0.13	19.95	296.94	6.7	100	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	23.1	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.739	371.09	6.7	22.2	
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.462	371.41	6.6	24.6	Vitrified Clay
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.068	500.5	6.2	19.9	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	27.9	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	27.9	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.711	512.97	6.2	19.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.501	511.59	6.2	100	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	19.3	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	35.9	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	16.6	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	33.8	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.205	581.9	5.9	21.2	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	17.6	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.516	455.56	5.8	18.2	PVC
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.66	27.585	476.76	5.8	19.7	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.55	2339.4	5.8	100	Vitrified Clay
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.396	480.62	5.5	16.7	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	16.2	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	16.6	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.915	1480.9	5.3	58.6	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	18.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.058	343.39	5.3	51	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.236	527.58	5.2	18.7	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.217	1150	5.1	20.2	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	15.3	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.385	343.06	5.1	67.9	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	18.3	

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	17.4	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	0.11	17.1	342.84	5	100	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	33.1	Vitrified Clay
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	59.8	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	15	PVC
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	14.1	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	17.1	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.338	493.11	4.7	17	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	14.9	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.43	2756.8	4.5	68.3	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	15.2	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	14.2	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	0.13	19.95	442.78	4.5	100	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.946	451.2	4.4	14.3	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	57.1	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	13.8	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.528	2054.1	4.4	22.9	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.368	556.67	4.4	57.9	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	42	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.482	494.65	4.3	20.9	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	18	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	14.5	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.7333	181.57	4.3	18.9	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.127	404.83	4.2	16.7	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	16.5	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	15.1	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.962	356.87	4.2	13.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	0.09	14.25	341.52	4.2	100	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.545	333.55	4.1	20.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41.003	1030.2	4	13	

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860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	14.3	Vitrified Clay
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.115	287.73	3.9	13.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.255	321.66	3.8	33.7	Vitrified Clay
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	0.11	17.1	450.68	3.8	100	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.788	875.9	3.7	27.5	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	25.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	100	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.517	465.42	3.5	15.4	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	16	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.767	505.55	3.5	14.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.435	439.69	3.5	100	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.237	553.53	3.5	13.4	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.901	442.9	3.4	12.4	PVC
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.115	334.02	3.3	13.5	Vitrified Clay
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.545	320.92	3.3	12.9	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	62.5	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.618	416.54	3.3	14.6	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	12.7	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	12.2	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.388	506.06	3.2	13.5	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	0.09	14.25	446.3	3.2	100	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.901	467.13	3.2	15	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.007	6	0.019	0.72	4.41	139.01	3.2	10.9	
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	12.4	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.574	428.51	3.2	18.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.978	351.02	3.1	13.8	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.005	8	0.01	1.4	15.116	484.91	3.1	14.5	PVC
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.0375	194.22	3.1	48.3	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.127	554.7	3.1	13.6	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.662	443.97	3.1	12.6	PVC

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3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.347	435.75	3.1	12	PVC
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	17.3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	12.6	Vitrified Clay
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.7725	230.02	2.9	21.5	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	17.8	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	13.2	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.636	709.15	2.9	44.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.115	494.2	2.9	16	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	16.2	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	14.1	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	14.4	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.912	1283.3	2.7	19.1	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.175	527.71	2.7	13.1	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	21.3	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.802	1147.1	2.6	36.2	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	24.9	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.05	8.55	330.07	2.6	100	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.915	501.36	2.6	14.5	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	16.4	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	15.7	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	23.1	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	13.8	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	13	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.625	670.63	2.5	19.2	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	100	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	11.6	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	100	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.81	4.135	169.18	2.4	39.7	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	10.6	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	18.3	Vitrified Clay

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673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.901	619.99	2.4	17.2	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.805	574.73	2.4	11.3	PVC
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	10.9	Vitrified Clay
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	55.5	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	14.8	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.703	669.54	2.3	14.1	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	14.6	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	100	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.741	463.16	2.3	12.7	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	12.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	10.6	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.154	530.84	2.3	10.8	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.529	1953.9	2.3	65.6	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	22.9	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	16.5	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.604	1009.7	2.2	10.7	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	0.15	22.8	1025.4	2.2	100	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.427	470.36	2.2	10.3	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.427	471.99	2.2	13.1	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.913	864.78	2.2	27	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	13.4	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	14.4	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.6125	359.79	2.1	50.8	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.5625	314.43	2.1	25.2	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	10.2	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.255	591.62	2.1	23.5	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	42	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	12.1	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	11	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	10.3	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	14.9	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.1235	303.34	2	17.8	Vitrified Clay
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	17.1	Vitrified Clay
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	11.1	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	17.5	PVC
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	13.3	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.555	1198.8	2	20.5	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	9.8	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	10.7	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	12.8	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.8225	248.74	1.9	15.4	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.8737	458.56	1.9	13.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.04	5.7	298.04	1.9	100	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	0.05	8.55	448.05	1.9	100	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.6771	455.49	1.9	10	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	11.7	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	100	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	11.5	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	9.6	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	31.7	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	9.2	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.0769	341.53	1.8	8.6	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.901	837.85	1.8	17.2	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.6225	205.41	1.8	10.6	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	25.2	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.041	2631.4	1.7	44.3	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.3125	487.09	1.7	11.1	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.417	2030.2	1.7	32	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.8517	465.33	1.7	10.8	PVC
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	18.6	Vitrified Clay

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	10.2	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	10.5	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	10.4	Vitrified Clay
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	54.5	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	100	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	35.8	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	13.9	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	20	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	12.9	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.5542	470.5	1.6	13.1	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	0.05	7.125	444.74	1.6	100	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.688	1231.2	1.6	16.2	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.7375	431.72	1.6	8.5	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	8.3	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	13.2	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	10.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	10.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.396	1782.6	1.5	12.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	8.8	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	12.3	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	39.3	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	10.3	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.759	4904.3	1.4	12.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.321	1008.4	1.4	10.3	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	10	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	24.5	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	11	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	9.1	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.9925	224.99	1.3	8.7	Vitrified Clay
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.795	1873.1	1.3	58	PVC

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1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	9.9	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	10.4	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	12.5	PVC
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	7.9	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76.004	5961.7	1.3	58.4	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.3625	186.95	1.3	67.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	9.5	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	9.3	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	58.6	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	9	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	32.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	8	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	61	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	8.3	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	10.6	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	9.4	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	8.7	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.4567	827	1.1	11.9	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	58.7	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	8.7	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	7.5	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	7.3	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.4792	222.53	1.1	7.3	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.938	1252.3	1.1	7.3	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.97	11.4	1025.7	1.1	18.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.7917	342.43	1.1	23.7	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	100	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	8.4	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	8.2	Vitrified Clay
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	65.2	Vitrified Clay

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3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.2208	497.45	1	9.7	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	10.3	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	9.4	
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	8.8	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	8.9	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	12.9	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	16.2	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	41.5	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.252	4982.7	1	56.7	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	8.4	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	7.3	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.5675	477.36	1	8.3	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.3337	350.8	1	8.1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	10.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	9.5	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	11.5	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.88	3.99	446.55	0.9	59.1	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.5675	516.97	0.9	6.8	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	8.2	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	8	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	7.8	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	9.2	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	7.3	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	12.5	Vitrified Clay
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	8.2	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	7.4	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	13.9	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.7198	975.16	0.8	7.6	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.5625	451.05	0.8	10.1	PVC
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	8.3	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	10.3	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	7.2	Vitrified Clay
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	14.9	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	8.3	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	19.4	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	51.1	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	20.4	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	6	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	24.4	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.0875	1048.7	0.7	9	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	6.2	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	11.1	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	13.8	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	9.3	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	10.9	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	10.9	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	14.8	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.1375	341.77	0.6	10.7	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	8.5	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	11.1	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	6.5	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	28	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A1(	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	12.3	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	6.9	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	12.3	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	7.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.0417	349.5	0.6	6.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	26.5	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.3333	404.28	0.6	13.8	
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	11.9	PVC

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.0475	361.35	0.6	7.1	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	1.55	2.85	508.53	0.6	75	
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.974	3305.6	0.5	6.7	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	5.1	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	13.7	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	5.7	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	9.9	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	7.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.8583	560.08	0.5	11.9	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	14.1	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	11	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	6.3	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	6.1	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	20.4	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	5.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.8583	581.84	0.5	11.2	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	6	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	7	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.625	12469	0.5	57.4	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	8.2	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	23	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	37.3	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	15	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	53.1	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	8.1	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.0883	471.24	0.4	8.5	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.0883	476.91	0.4	14.5	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	5.1	Vitrified Clay
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	6.9	Vitrified Clay

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	12.1	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	52.3	PVC
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	4.9	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	7.6	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	50.7	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	19.6	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.3168	823.44	0.4	40.5	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	6.8	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	6.5	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	7	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	8	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	5.2	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	5.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	5.2	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.2625	70.459	0.4	7.7	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	25.3	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	9.8	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	7.9	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	8.3	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.2625	73.273	0.4	11.9	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	6.6	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	5.9	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	8.3	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	7.9	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	6.5	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	6	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	6.4	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	5.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	7.4	
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	7	PVC

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566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	8	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	7.7	
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	7.9	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.5799	475.18	0.3	6.9	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	6.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	4.4	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	9.7	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	84	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	4.8	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	4.8	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	9.2	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	6.6	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	5.9	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.7875	256.41	0.3	7.1	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.0417	687.31	0.3	44.8	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	22.2	
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.255	8266.1	0.3	54.7	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	17.7	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	9.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	5	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	7.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	6	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.2417	2221.4	0.3	6.5	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	6.6	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	10.1	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.4667	174.81	0.3	5.6	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	5.7	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	19.2	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	6.6	Vitrified Clay
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	19.4	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	6.6	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.0442	423.66	0.2	16.7	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	14.7	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.0442	451.48	0.2	5.4	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	3.6	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	4.9	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.2625	120.45	0.2	11.9	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	5.7	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	10	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	51.7	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	6.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	6.6	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	6.2	Vitrified Clay
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0.01	1.285	652.28	0.2	55.4	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	5.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	10.7	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	6.1	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	8.6	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	6.5	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	100	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	6	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	4.7	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	52	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	5.7	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	6.5	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	8.1	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	7	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	5.3	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	5	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.7875	466.92	0.2	4.9	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	4.3	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	5	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	7	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.7125	432.09	0.2	4.4	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	5.1	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	7.8	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	5.3	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	6.6	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	4.4	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	5.3	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	10	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	4.9	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	5.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	26.7	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	52	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	9.4	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	3.6	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.2625	171.43	0.2	6	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	9.1	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	6.4	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	5.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	15.4	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	8.4	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	18.9	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	51.4	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	6.8	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	4.2	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	6.3	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	9.7	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	51.8	Vitrified Clay

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Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	5.7	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	3.9	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	38.6	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	7.3	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	5.7	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.8292	2162.4	0.1	4.4	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	4.7	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	6.3	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	8.3	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.2625	202.47	0.1	11.9	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	15.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	4.6	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	4.2	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	100	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	3.7	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	5	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	8.9	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	45.9	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	9.8	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	4.7	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	13.5	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	6.9	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	21.5	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	5	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	4.8	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	3.8	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	4.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	4.6	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	2.5	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	4.4	Vitrified Clay

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612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	4.6	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	24	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	4.5	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	58	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.2625	280.02	0.1	7.2	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	5.7	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	45.9	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	6.2	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	100	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	100	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	11	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	4.5	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	4.9	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	12.3	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	8.3	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	4.6	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	7.3	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	51.8	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	52	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	4.6	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.2625	343.6	0.1	42.2	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	7.3	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.2625	358.36	0.1	3.2	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	3.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	7	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	7.6	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	57.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	22.6	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	51.4	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.2625	429.13	0.1	3.2	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	3	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	3.2	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	2.6	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	24.9	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	12.3	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.0442	2376.2	0	5.3	PVC
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	3.1	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	10.5	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	2.9	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	2.5	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	8.4	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	3.2	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	1.9	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	1.9	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.2625	2474.3	0	13.9	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	5.5	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	4.6	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	9.8	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	3.7	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	3.2	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	12.5	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	100	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	7.7	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	0	0	266.59	0	50	Vitrified Clay
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	50	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	5.1	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	0	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	(N/A)	PVC

EXHIBIT E.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
67	M17A9	8.5	8.5	16416	0	449.5	11.4	460.89	0.79	0.8	FALSE	TRUE
359	M3A1	6.4	6.4	8964	-1.8	356.9	6.225	363.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.7	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1914	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	660.9	0	660.86	1.73	-1.8	FALSE	TRUE
534	M14A3	5.9	5.9	0	-2.6	98.12	0	98.119	0.83	-1.8	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.12	1.995	98.119	1.28	-1.8	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.62	25.298	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.3125	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.888	2.8875	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.3	22.051	365.33	0.71	-1.2	FALSE	TRUE
1056	M17A1	8.6	8.6	41040	-7	795.7	28.5	824.17	0.71	-6.3	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1080	M17A10	8.7	8.7	6156	0.6	430.3	4.275	434.53	1.25	1.8	FALSE	TRUE
1087	M17A11	8.9	8.9	32832	1.6	365.4	22.8	388.21	1.52	3.1	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	5.38	4.9	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.5	17.1	159.55	4.66	5.1	TRUE	TRUE
1101	M14D2	4.9	4.9	16416	1.3	131.1	11.4	142.45	3.67	4.9	TRUE	TRUE
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	2.93	5.1	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94	11.4	105.4	2.34	5.1	FALSE	TRUE
1107	M14C4	6.2	6.2	185132.02	-1.4	302.1	128.56	430.62	5.35	4	FALSE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	430.6	20.52	451.14	4.31	2	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	451.1	0	451.14	4.23	1.8	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	562.7	0	562.74	3.87	1.2	FALSE	TRUE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	1.66	5.1	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	4.59	5.1	FALSE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	4.18	5.2	FALSE	TRUE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	3.41	5.2	FALSE	TRUE
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	2.66	5.2	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.39	4.7817	76.174	1.41	-0.2	FALSE	TRUE
1284	M22A5	5.4	5.4	122526	2.2	0	85.088	85.088	0.21	2.4	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	3.89	5.2	FALSE	TRUE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	3.44	5.2	FALSE	TRUE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	2.62	5.2	FALSE	TRUE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	2.08	5.2	FALSE	TRUE
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	2.74	5.2	FALSE	TRUE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	1.92	5.2	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.078	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.0442	1.0442	0.02	5	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1393	M17B1	8.8	8.8	0	2.2	173.1	0	173.14	0.91	3.1	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.5	2.3625	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.96	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634	11.159	645.2	0.78	-3.6	FALSE	TRUE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	1.99	4.9	FALSE	TRUE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	1.52	4.9	FALSE	TRUE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	1.15	4.9	FALSE	TRUE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.73	4.9	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.938	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.618	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.636	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.3168	3.3168	0.04	0	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.7375	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.3337	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.46667	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.688	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.625	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.29999	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.2625	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.2625	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE
4266	M37A5	5	5	1503.6	3	0	1.0442	1.0442	0.02	3	FALSE	TRUE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	2.17	5.2	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.9925	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.805	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	0.25	5.1	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
68	M17J1	8.8	8.8	16416	3.7	3.563	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.7125	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	196.9	7.695	204.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.125	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.3	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.19	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	162	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.6	14.381	694	0.53	-4.1	FALSE	FALSE
530	M14A1	6.3	6.3	0	-4	752.8	0	752.77	0.58	-3.4	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.93	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.53	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.73	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.13	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.7333	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.63	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.3125	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.313	8.3125	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.164	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.51	16.164	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.67	16.164	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.8	7.8517	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.308	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.457	9.4567	18.913	0.09	2.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
632	M36H1	8.8	8.8	11306.4	3	15.7	7.8517	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.852	7.8517	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.8517	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.34	16.164	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.4567	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.9	7.8517	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.6	53.098	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.8	35.034	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.33	10.741	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.22	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.74	10.741	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.741	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.369	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.8	0	29.802	0.15	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
674	M36B6	5.7	5.7	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.9	0	14.901	0.08	2.1	FALSE	FALSE
677	M36B3	6.4	8.3	3439.8	-0.1	70.8	2.3888	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.08	1.5225	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.034	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.07	10.741	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.8	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.9	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	505.9	0	505.93	0.45	-1.7	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.04	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.04	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.92	7.125	45.041	0.14	1.9	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
700	M17L4	7.6	7.6	16416	2.3	26.52	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.12	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.116	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	166.7	1.995	168.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	2.71	1.425	4.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	1.285	1.285	6.93	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	176.1	2.565	178.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.55	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.4	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.7917	3.7917	0.05	3.6	FALSE	FALSE
900	M23B1	5.4	5.4	56700	1.9	3.792	39.375	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.3333	2.3333	0.04	2.2	FALSE	FALSE
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	22.23	5.355	27.585	0.11	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	38.3	3.15	41.445	0.15	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	17.19	2.52	19.71	0.11	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	14.67	2.52	17.19	0.11	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	12.15	2.52	14.67	0.1	1.9	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
929	M5A8	6.3	6.3	4082.4	3.1	0.315	11.835	12.15	0.09	3.2	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.33	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.623	3.15	6.7725	0.06	3.1	FALSE	FALSE
966	M4G2	7.4	7.4	907.2	5.4	2.993	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.8375	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.8375	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.7	9.5618	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.413	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.263	2.8875	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.2625	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.2625	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.3	0	365.33	0.43	-1.6	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
999	M34A4	4.1	4.1	0	-3	365.3	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.0417	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	591.4	1.8895	593.32	0.73	-5.7	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	505.9	0	505.93	0.45	-3	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	718.7	0	718.72	0.75	-5.9	FALSE	FALSE
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.167	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.538	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.39	2.85	19.237	0.09	2.6	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1086	M17A12	9.4	9.4	131328	4	0	91.2	91.2	0.23	4.2	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.12	-1.8	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.58	5.415	88.999	0.64	-1.7	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.63	15.279	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.633	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.17	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.97	3.42	17.385	0.24	-0.2	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.51	1.425	27.93	0.13	0.5	FALSE	FALSE
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.96	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.713	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.7125	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.83	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	362.5	27.417	389.91	0.39	-1	FALSE	FALSE
1270	M22F1	4.7	4.7	0	-1.8	0	0	0	1.26	-0.5	FALSE	FALSE
1274	M22A2	4.8	4.8	20412	-0.8	348.3	14.175	362.49	0.53	-0.3	FALSE	FALSE
1276	M22B1	6.2	6.2	123832.8	1.2	0.945	85.995	86.94	0.2	1.4	FALSE	FALSE
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	244.4	17.01	261.37	0.37	1.3	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.03	0	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.53	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.08	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.08	0	88.078	0.1	1.6	FALSE	FALSE
1330	M40A4	7.5	7.5	0	2.7	88.08	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.978	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.2575	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	236	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.71	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.96	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.568	4.3062	8.8737	0.06	2.8	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1359	M16A8	6.1	6.1	0	3.5	4.568	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.788	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.7875	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.048	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.0475	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.66	1.0442	44.699	0.14	-0.3	FALSE	FALSE
1370	M37A3	5.4	5.4	4510.8	-1.6	44.7	3.1325	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.0883	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.76	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.309	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.0883	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.088	3.1325	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.0442	1.0442	0.02	-0.4	FALSE	FALSE
1395	M17B2	9	9	0	2.6	173.1	0	173.14	0.56	3.1	FALSE	FALSE
1397	M17B3	8	8	32832	3.4	150.3	22.8	173.14	0.29	3.7	FALSE	FALSE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	0.07	3.8	FALSE	FALSE
1401	M17B4	8.1	8.1	0	4	138.9	0	138.94	0.48	4.5	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	127.5	11.4	138.94	0.26	4.9	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.07	5	FALSE	FALSE
1407	M17B6	7.7	7.7	68742	5.6	68.4	47.737	116.14	0.23	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.27	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.042	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.74	0	59.743	0.17	-1	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1426	M32C1	5.7	5.7	0	0	13.81	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.07	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.54	8.5313	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.517	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.665	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.21	19.487	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.48	38.951	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.34	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.77	5.5708	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.7198	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.2625	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.1	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.1	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.088	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.5	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.83	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.25	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.9	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.32	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.4	8.0208	34.417	0.11	-0.9	FALSE	FALSE
1521	M34C2	7.1	7.1	0	-0.3	26.4	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.6	3.7917	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.6042	22.604	0.1	3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.21	5.5903	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.43	0	10.427	0.07	2.3	FALSE	FALSE
1536	M34B3	5.7	5.7	2520	2.9	8.677	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.58	7.0972	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.5799	1.5799	0.03	4.3	FALSE	FALSE
1550	M17F1	9.1	9.1	32832	2.8	78.28	22.8	101.08	0.39	3.2	FALSE	FALSE
1552	M17F2	8.9	8.9	0	3.9	78.28	0	78.277	0.22	4.1	FALSE	FALSE
1554	M17F3	10.9	10.9	70178.4	4	29.54	48.735	78.277	0.19	4.2	FALSE	FALSE
1556	M17F4	10	10	42540	5.2	0	29.542	29.542	0.14	5.4	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.05	2.8583	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.18	5.7167	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.48	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.38	8.0938	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.554	16.908	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.5542	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.71	31.208	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.0769	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.077	6.0769	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.87	6.0769	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.12	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE
1695	M38A5	4.9	4.9	18901.68	-2.1	19.95	13.126	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.07	13.126	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.2	13.126	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.3	27.065	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.94	27.065	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.3	13.952	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.24	13.618	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.62	13.618	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.3	10.733	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.829	3.4708	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.2417	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.242	8.0792	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.8292	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.72	10.047	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	23	1.26	24.255	0.09	-1.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3102	M34G1	5.2	5.2	68390	3.8	0	47.493	47.493	0.16	4	FALSE	FALSE
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.878	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.2625	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.2625	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.888	2.8875	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.33	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.59	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.84	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.47	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.98	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.11	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.5	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.46	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.35	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.032	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.8	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.01	6.8779	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.83	17.181	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.432	34.432	0.13	2.1	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3642	M18A-A1	5.1	5.1	0	-1	76	0	76.004	0.17	-0.8	FALSE	FALSE
3682	M22A4	5.5	5.5	0	1.6	244.4	0	244.36	0.43	2	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.334	4.9963	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.467	2.0125	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.94	49.613	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.63	23.625	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	43.97	2.205	46.17	0.16	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.37	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.89999	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.263	2.3625	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.13	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.86	10.125	102.99	0.24	0.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	505.9	0	505.93	0.68	-5.7	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	505.9	0	505.93	0.6	-5.1	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.66	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.29	12.242	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT E.3
FORCEMAIN DATA TABLE REPORT

Model Forcemain Data Table 25 Units Per Acre Build-Out
Exhibit E3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

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3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

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3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB	PMP-18A-B	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

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3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

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3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

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1791	O2L26FB1	W-26	PMP-26B	Natural stream we	0.1	7.7	20	0.045	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

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3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
435	O2L18A-FA	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
436	O2L18A-FA	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)

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473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	######	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)

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3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3651	O2L34BYEF	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)

Model Forcemain Data Table 25 Units Per Acre Build-Out
Exhibit E3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)

EXHIBIT E.4
PRESSURE NODE DATE TABLE REPORT

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE
1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT E.5
PUMP DATA TABLE REPORT

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9
64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
482	PMP4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT E.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 25 Units Per Acre
Exhibit E6

ID	Label	Elevation (Ground) (ft)	Elev (Invert) (ft)	Boundary Condition Type	Elevation (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1020	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3724	Measured 10 psi or 23 feet of Head on Monday 6/12/2023

EXHIBIT F.1
GRAVITY SEWER DATA TABLE REPORT

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	4.39	687.4	302.61	227.2	Vitrified Clay
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	5.01	785.6	346.58	226.7	Vitrified Clay
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	3.68	575.8	298.52	192.9	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	3.68	575.8	303.48	189.7	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	3.54	555.3	297.54	186.6	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	3.43	537.1	325.59	165	Vitrified Clay
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.9	138.37	157.5	Vitrified Clay
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	3.6	563.5	364.07	154.8	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	PVC
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.3	247.26	147.8	Vitrified Clay
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	3.13	490.8	342.94	143.1	Vitrified Clay
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.94	460.5	372.16	123.7	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.6	224.95	106.5	Vitrified Clay
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.48	821.3	775.54	105.9	Vitrified Clay
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.95	926.8	912.44	101.6	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.1	297.81	101.4	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.24	695.9	692.29	100.5	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.31	362.1	362.33	99.9	
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.39	326.5	327.87	99.6	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.8	494.45	91.6	PVC
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.37	608.5	751.26	81	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.3	454.36	80.4	PVC
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	3.12	343.5	442.87	77.6	
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.2	349.46	73	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.7	296.91	72	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.64	608.5	856.88	71	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.1	307.09	69.4	Vitrified Clay
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.9	452.17	58.4	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	203.6	370.12	55	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.14	177.6	329.9	53.8	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.6	299.18	53.3	Vitrified Clay
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.7	212.41	53.1	PVC
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	167.7	322.05	52.1	Vitrified Clay
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	1.12	176	370.1	47.6	PVC
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	1.34	210.2	446.82	47	PVC
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	Vitrified Clay
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	2.38	167.2	386.07	43.3	
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.004	6	0.013	1.64	64.5	150.5	42.9	Vitrified Clay
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.92	608.5	1443.4	42.2	Vitrified Clay
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.2	344.92	40.3	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.2	558.68	40.3	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.63	192.58	39.8	Vitrified Clay
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	1.34	210.2	538.07	39.1	PVC
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.9	299.16	39.1	Vitrified Clay
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.72	176	454.91	38.7	PVC
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.2	288.2	38.6	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136	357.52	38.1	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.8	414.13	37.9	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	1.13	99.38	266.59	37.3	Vitrified Clay
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.3	296.6	36.5	Vitrified Clay
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	0.83	130.3	358.04	36.4	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	0.81	127.5	362.32	35.2	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.5	465.9	34.9	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.58	153.2	444.28	34.5	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.3	1067.6	34.2	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.17	128.33	33.6	
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	0.69	107.5	335.02	32.1	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.9	479.4	31.1	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.4	449.63	28.3	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	PVC
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	5.39	608.5	2230.1	27.3	Vitrified Clay
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.2	397.39	27.2	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	103	380.57	27.1	Vitrified Clay
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	0.91	142.5	533.77	26.7	Vitrified Clay
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	0.57	89	343.16	25.9	Vitrified Clay
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	0.69	107.5	421.82	25.5	Vitrified Clay
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.8	413.76	25.3	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.5	1071.6	25.2	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.6	488.56	23.9	PVC
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.031	12	0.012	6.98	694	3033.5	22.9	Ductile Iron
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.03	300.43	22.6	Vitrified Clay
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.36	410.39	22.3	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.67	399.19	22.2	PVC
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.53	184.22	21.5	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.3	857.64	21.4	
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.33	272.74	20.7	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.08	434.47	20.3	PVC
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.08	436.66	20.2	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.49	236.19	20.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.01	433.85	19.1	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.08	465.75	18.9	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.08	468.18	18.8	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	1.55	58.75	317.28	18.5	Vitrified Clay
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.51	395.17	18.3	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.63	379.78	17.3	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.65	441.38	17.1	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A4	0.2	162.3	0.003	8	0.01	1.88	67.5	395.19	17.1	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A2	-0.7	102.4	0.004	8	0.01	0.49	76	446.05	17	PVC
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	7.4	587.3	3518.3	16.7	
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.32	358.4	16.6	
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	1.89	37.17	225.16	16.5	PVC
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	0.45	71.25	444.4	16	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.12	619.43	15.8	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	0.63	98.12	628.94	15.6	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A3	-0.3	112.6	0.004	8	0.01	2.07	69.07	445.71	15.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.17	492.39	15.5	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.07	522.31	15.3	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	PVC
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.81	32.45	223.47	14.5	PVC
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.34	399.96	14.1	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.74	435.71	13.7	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A5	0.7	121.8	0.004	8	0.01	2.04	61.2	460.67	13.3	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A1	0.4	95.8	-0.011	8	0.013	0.49	76	575.97	13.2	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.37	171.88	13	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.6	864.45	12.7	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.81	724.35	12.5	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.7	3804.2	12.5	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.73	182.79	12.4	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A7	1.7	100.8	0.004	8	0.01	1.95	54.9	449.6	12.2	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.19	465.32	12.1	PVC
1510	O2L18ASA7	M18A-A7	1.7	M18A-A6	1.2	120	0.004	8	0.01	2	55.84	464.08	12	PVC
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.69	465.86	11.5	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	PVC
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.91	847.57	10.8	Vitrified Clay
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	0.2	31.35	302.71	10.4	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.2	452.36	10.2	PVC
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.04	448.12	10.1	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.04	451.18	10	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.83	482.4	9.9	PVC
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	0.86	210.2	2218.4	9.5	PVC
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.71	348.09	9.1	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86	952.5	9	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.7	500.45	8.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.03	1041.2	8.8	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.85	465.5	8.8	PVC
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	4.62	102.8	1177.4	8.7	PVC
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.004	8	0.013	1.34	29.8	343.01	8.7	
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.37	260.6	8.6	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.92	445.75	8.5	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	Vitrified Clay
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.48	1150.3	8.3	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.17	923.17	8.3	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.33	843.1	8.2	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.84	1019.8	8.2	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.1	355.25	8.2	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	Vitrified Clay
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.63	295.15	8	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.55	169.51	8	Vitrified Clay
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	1.403	10	0.013	26.73	877.5	11649	7.5	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	Vitrified Clay
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.9	311.19	7.4	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.07	450.33	7.3	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.94	630.08	7.3	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.43	480.46	7.2	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.48	1378.3	6.9	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.2	410.79	6.9	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	Vitrified Clay
4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.81	204.55	6.7	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	0.13	19.95	296.94	6.7	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.74	371.09	6.7	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.46	371.41	6.6	Vitrified Clay
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.07	500.5	6.2	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.71	512.97	6.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.5	511.59	6.2	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.21	581.9	5.9	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.52	455.56	5.8	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.6	2339.4	5.8	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.15	10.71	186.47	5.7	Vitrified Clay
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	1.877	14	0.012	37.83	1914	34448	5.6	Ductile Iron
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.4	480.62	5.5	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.92	1480.9	5.3	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.06	343.39	5.3	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.24	527.58	5.2	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.22	1150	5.1	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.39	343.06	5.1	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	
848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	0.11	17.1	342.84	5	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	0.99	8.19	169.58	4.8	Vitrified Clay
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.34	493.11	4.7	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.4	2756.8	4.5	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	0.13	19.95	442.78	4.5	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.95	451.2	4.4	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.53	2054.1	4.4	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.37	556.67	4.4	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.48	494.65	4.3	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.733	181.57	4.3	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.13	404.83	4.2	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.96	356.87	4.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	0.09	14.25	341.52	4.2	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.55	333.55	4.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41	1030.2	4	
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.47	18.59	476.76	3.9	PVC
860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.12	287.73	3.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.26	321.66	3.8	Vitrified Clay
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	0.11	17.1	450.68	3.8	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.79	875.9	3.7	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.52	465.42	3.5	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.77	505.55	3.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.44	439.69	3.5	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.24	553.53	3.5	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.9	442.9	3.4	PVC
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	0.89	5.67	169.64	3.3	Vitrified Clay
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.12	334.02	3.3	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.004	8	0.01	1.35	15.12	456.92	3.3	PVC
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.55	320.92	3.3	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.62	416.54	3.3	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.39	506.06	3.2	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	0.09	14.25	446.3	3.2	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.9	467.13	3.2	PVC
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.57	428.51	3.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.98	351.02	3.1	Vitrified Clay
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.038	194.22	3.1	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.13	554.7	3.1	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.66	443.97	3.1	PVC
3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.35	435.75	3.1	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	Vitrified Clay
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.773	230.02	2.9	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.64	709.15	2.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.12	494.2	2.9	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.91	1283.3	2.7	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.18	527.71	2.7	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.8	1147.1	2.6	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.05	8.55	330.07	2.6	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.92	501.36	2.6	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.63	670.63	2.5	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	Vitrified Clay
673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.9	619.99	2.4	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.81	574.73	2.4	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	Vitrified Clay
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.7	669.54	2.3	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.74	463.16	2.3	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.15	530.84	2.3	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.53	1953.9	2.3	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.6	1009.7	2.2	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	0.15	22.8	1025.4	2.2	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.43	470.36	2.2	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.43	471.99	2.2	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.91	864.78	2.2	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.613	359.79	2.1	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.563	314.43	2.1	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.26	591.62	2.1	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	Vitrified Clay
788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.124	303.34	2	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	Vitrified Clay
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.017	6	0.019	0.99	4.41	222.44	2	
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.56	1198.8	2	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.823	248.74	1.9	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.874	458.56	1.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.04	5.7	298.04	1.9	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	0.05	8.55	448.05	1.9	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.677	455.49	1.9	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	0.74	3.15	169.28	1.9	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.74	3.135	169.18	1.9	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.077	341.53	1.8	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.9	837.85	1.8	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.623	205.41	1.8	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.04	2631.4	1.7	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.313	487.09	1.7	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.42	2030.2	1.7	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.852	465.33	1.7	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	Vitrified Clay
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	Vitrified Clay
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.554	470.5	1.6	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	0.05	7.125	444.74	1.6	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.69	1231.2	1.6	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.738	431.72	1.6	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.4	1782.6	1.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.76	4904.3	1.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.32	1008.4	1.4	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.993	224.99	1.3	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.8	1873.1	1.3	PVC
1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	PVC
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76	5961.7	1.3	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.363	186.95	1.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.457	827	1.1	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.479	222.53	1.1	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.94	1252.3	1.1	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.03	11.4	1025.7	1.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.792	342.43	1.1	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	Vitrified Clay
3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.221	497.45	1	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A6	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.25	4982.7	1	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.568	477.36	1	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.334	350.8	1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.03	3.99	446.55	0.9	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.568	516.97	0.9	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	Vitrified Clay
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.72	975.16	0.8	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.563	451.05	0.8	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	Vitrified Clay
1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	Vitrified Clay
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.088	1048.7	0.7	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.138	341.77	0.6	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A10	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.042	349.5	0.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.333	404.28	0.6	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	PVC
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.048	361.35	0.6	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	0.03	2.85	508.53	0.6	
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.97	3305.6	0.5	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.858	560.08	0.5	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.858	581.84	0.5	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.63	12469	0.5	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.088	471.24	0.4	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.088	476.91	0.4	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	Vitrified Clay
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A3	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	PVC
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.317	823.44	0.4	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.263	70.459	0.4	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.263	73.273	0.4	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	PVC
566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.58	475.18	0.3	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.788	256.41	0.3	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.042	687.31	0.3	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.26	8266.1	0.3	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.242	2221.4	0.3	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.467	174.81	0.3	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	Vitrified Clay
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.044	423.66	0.2	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.044	451.48	0.2	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.263	120.45	0.2	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.788	466.92	0.2	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.713	432.09	0.2	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.263	171.43	0.2	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A5	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.829	2162.4	0.1	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.263	202.47	0.1	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.263	280.02	0.1	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.263	343.6	0.1	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.263	358.36	0.1	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.263	429.13	0.1	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.044	2376.2	0	PVC
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0	0.285	652.28	0	Vitrified Clay
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.263	2474.3	0	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	PVC
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	PVC

EXHIBIT F.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
67	M17A9	8.5	8.5	16416	0	552.09	11.4	563.49	1.15	1.2	FALSE	TRUE
359	M3A1	6.4	6.4	8964	-1.8	355.85	6.225	362.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.72	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1913.6	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	785.55	0	785.55	2.38	-1.2	FALSE	TRUE
534	M14A3	5.9	5.9	0	-2.6	98.119	0	98.119	1.48	-1.1	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.124	1.995	98.119	1.94	-1.1	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.617	25.298	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.3125	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.8875	2.8875	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.28	22.051	365.33	0.71	-1.2	FALSE	TRUE
1056	M17A1	8.6	8.6	41040	-7	898.27	28.5	926.77	0.76	-6.2	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1080	M17A10	8.7	8.7	6156	0.6	532.85	4.275	537.13	2.15	2.7	FALSE	TRUE
1086	M17A12	9.4	9.4	183654	4	0	127.54	127.54	0.84	4.9	FALSE	TRUE
1087	M17A11	8.9	8.9	32832	1.6	468.01	22.8	490.81	3.18	4.7	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	7.65	7.2	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.45	17.1	159.55	4.66	5.1	TRUE	TRUE
1101	M14D2	4.9	4.9	16416	1.3	131.05	11.4	142.45	3.67	4.9	TRUE	TRUE
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	2.93	5.1	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94.002	11.4	105.4	2.34	5.1	FALSE	TRUE
1107	M14C4	6.2	6.2	364682	-1.4	302.05	253.25	555.3	7.62	6.2	TRUE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	555.3	20.52	575.82	6.95	4.6	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	575.82	0	575.82	6.76	4.4	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	687.43	0	687.43	6	3.3	FALSE	TRUE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	1.66	5.1	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	6.64	7.1	TRUE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	6.23	7.2	FALSE	TRUE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	5.46	7.2	FALSE	TRUE
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	4.71	7.2	FALSE	TRUE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.78	-1.1	FALSE	TRUE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.584	5.415	88.999	1.29	-1.1	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.393	4.7817	76.174	1.41	-0.2	FALSE	TRUE
1270	M22F1	4.7	4.7	143100	-1.8	0	99.375	99.375	1.79	0	FALSE	TRUE
1274	M22A2	4.8	4.8	20412	-0.8	446.34	14.175	460.51	0.88	0.1	FALSE	TRUE
1284	M22A5	5.4	5.4	240786	2.2	0	167.21	167.21	0.31	2.5	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	5.94	7.2	FALSE	TRUE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	5.49	7.2	FALSE	TRUE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	4.67	7.2	FALSE	TRUE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	4.13	7.2	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	4.79	7.2	FALSE	TRUE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	3.97	7.2	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.078	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.0442	1.0442	0.02	5	FALSE	TRUE
1393	M17B1	8.8	8.8	0	2.2	210.19	0	210.19	2.56	4.7	FALSE	TRUE
1395	M17B2	9	9	0	2.6	210.19	0	210.19	2.25	4.8	FALSE	TRUE
1397	M17B3	8	8	32832	3.4	187.39	22.8	210.19	1.52	5	FALSE	TRUE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	1.25	5	FALSE	TRUE
1401	M17B4	8.1	8.1	0	4	175.99	0	175.99	1.06	5.1	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.54	2.3625	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76.004	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.964	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634.04	11.159	645.2	0.78	-3.6	FALSE	TRUE
1550	M17F1	9.1	9.1	32832	2.8	107.49	22.8	130.29	2.11	4.9	FALSE	TRUE
1552	M17F2	8.9	8.9	0	3.9	107.49	0	107.49	1.1	5	FALSE	TRUE
1554	M17F3	10.9	10.9	70178.4	4	58.754	48.735	107.49	1	5	FALSE	TRUE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	1.99	4.9	FALSE	TRUE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	1.52	4.9	FALSE	TRUE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	1.15	4.9	FALSE	TRUE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.73	4.9	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.938	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.618	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132.03	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.636	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.3168	3.3168	0.04	0	FALSE	TRUE
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.7375	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.3337	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.46667	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.688	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.625	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.29999	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.2625	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.2625	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE
4266	M37A5	5	5	1503.6	3	0	1.0442	1.0442	0.02	3	FALSE	TRUE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	4.22	7.2	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.9925	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.805	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	2.3	7.1	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
68	M17J1	8.8	8.8	16416	3.7	3.5625	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.7125	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	195.87	7.695	203.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.125	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.25	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.23	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	161.96	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.62	14.381	694	0.53	-4.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
530	M14A1	6.3	6.3	0	-4	877.46	0	877.46	0.63	-3.3	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.933	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.533	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.733	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.133	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.7333	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.633	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.3125	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.3125	8.3125	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.164	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.508	16.164	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.673	16.164	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.84	7.8517	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.308	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.4567	9.4567	18.913	0.09	2.3	FALSE	FALSE
632	M36H1	8.8	8.8	11306.4	3	15.703	7.8517	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.8517	7.8517	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.8517	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.344	16.164	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.4567	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.91	7.8517	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.64	53.098	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.84	35.034	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.331	10.741	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.221	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.741	10.741	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.741	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.369	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.802	0	29.802	0.13	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
674	M36B6	5.7	5.7	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.901	0	14.901	0.08	2.1	FALSE	FALSE
677	M36B3	6.4	8.3	3439.8	-0.1	70.801	2.3888	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.077	1.5225	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.034	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.072	10.741	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.802	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.901	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	608.53	0	608.53	0.49	-1.6	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.041	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.041	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.916	7.125	45.041	0.14	1.9	FALSE	FALSE
700	M17L4	7.6	7.6	16416	2.3	26.516	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.116	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.116	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	165.66	1.995	167.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	1.71	1.425	3.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	0.285	0.285	6.92	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	175.07	2.565	177.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.545	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.35	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.7917	3.7917	0.05	3.6	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
900	M23B1	5.4	5.4	56700	1.9	3.7917	39.375	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.3333	2.3333	0.04	2.2	FALSE	FALSE
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	13.23	5.355	18.585	0.09	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	29.295	3.15	32.445	0.13	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	8.19	2.52	10.71	0.08	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	5.67	2.52	8.19	0.07	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	3.15	2.52	5.67	0.06	1.9	FALSE	FALSE
929	M5A8	6.3	6.3	4082.4	3.1	0.315	2.835	3.15	0.05	3.1	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.325	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.6225	3.15	6.7725	0.06	3.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
966	M4G2	7.4	7.4	907.2	5.4	2.9925	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.8375	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.8375	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.68	9.5618	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.4125	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.2625	2.8875	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.2625	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.2625	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.33	0	365.33	0.43	-1.6	FALSE	FALSE
999	M34A4	4.1	4.1	0	-3	365.33	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.0417	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	694.03	1.8894	695.92	0.83	-5.6	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	608.53	0	608.53	0.49	-2.9	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	821.32	0	821.32	0.84	-5.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.167	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.538	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.388	2.85	19.237	0.18	2.7	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.633	15.279	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.633	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.174	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.965	3.42	17.385	0.24	-0.2	FALSE	FALSE
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.505	1.425	27.93	0.13	0.5	FALSE	FALSE
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.957	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.7125	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.7125	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.825	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	559.89	27.417	587.31	0.48	-0.9	FALSE	FALSE
1276	M22B1	6.2	6.2	146728.8	1.2	0.945	101.9	102.84	0.22	1.4	FALSE	FALSE
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	326.49	17.01	343.5	0.44	1.4	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.04	0	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.528	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.078	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.078	0	88.078	0.1	1.6	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1330	M40A4	7.5	7.5	0	2.7	88.078	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.978	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.2575	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	235.96	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.711	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.961	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.5675	4.3062	8.8737	0.06	2.8	FALSE	FALSE
1359	M16A8	6.1	6.1	0	3.5	4.5675	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.7875	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.7875	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.0475	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.0475	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.655	1.0442	44.699	0.14	-0.3	FALSE	FALSE
1370	M37A3	5.4	5.4	4510.8	-1.6	44.699	3.1325	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.0883	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.759	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.3092	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.0883	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.0883	3.1325	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.0442	1.0442	0.02	-0.4	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	164.59	11.4	175.99	0.53	5.2	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.28	5.2	FALSE	FALSE
1407	M17B6	7.7	7.7	122094	5.6	68.4	84.788	153.19	0.27	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.26	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.0417	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.743	0	59.743	0.17	-1	FALSE	FALSE
1426	M32C1	5.7	5.7	0	0	13.805	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.068	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.537	8.5313	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.517	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.665	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.205	19.487	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.481	38.951	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.338	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.767	5.5708	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.7198	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.2625	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.13	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.13	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.0875	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.499	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.829	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.254	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.899	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.324	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.396	8.0208	34.417	0.11	-0.9	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1521	M34C2	7.1	7.1	0	-0.3	26.396	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.604	3.7917	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.6042	22.604	0.1	3	FALSE	FALSE
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.205	5.5903	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.427	0	10.427	0.07	2.3	FALSE	FALSE
1536	M34B3	5.7	5.7	2520	2.9	8.6771	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.5799	7.0972	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.5799	1.5799	0.03	4.3	FALSE	FALSE
1556	M17F4	10	10	84606	5.2	0	58.754	58.754	0.19	5.4	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.054	2.8583	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.179	5.7167	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.475	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.382	8.0938	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.5542	16.908	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.5542	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.711	31.208	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.0769	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.0769	6.0769	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.869	6.0769	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.115	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136.04	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE
1695	M38A5	4.9	4.9	18901.68	-2.1	19.946	13.126	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.072	13.126	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.198	13.126	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.33	27.065	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.938	27.065	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.25	13.952	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.236	13.618	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.618	13.618	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.26	10.733	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.8292	3.4708	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.2417	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.2417	8.0792	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.8292	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.7198	10.047	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	22.995	1.26	24.255	0.09	-1.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3102	M34G1	5.2	5.2	68390	3.8	0	47.493	47.493	0.16	4	FALSE	FALSE
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.8775	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.2625	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.2625	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.8875	2.8875	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.334	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.594	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.839	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.472	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.977	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.112	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.49	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.461	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.347	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.032	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.83	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.012	6.8779	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.831	17.181	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.432	34.432	0.13	2.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3642	M18A-A1	5.1	5.1	0	-1	76.004	0	76.004	0.17	-0.8	FALSE	FALSE
3682	M22A4	5.5	5.5	0	1.6	326.49	0	326.49	0.54	2.1	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.3337	4.9963	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.46667	2.0125	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.938	49.613	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.625	23.625	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	34.965	2.205	37.17	0.14	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.365	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.89999	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.2625	2.3625	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.127	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.861	10.125	102.99	0.24	0.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	608.53	0	608.53	0.79	-5.6	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	608.53	0	608.53	0.69	-5	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.655	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.288	12.242	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT F.3
FORCEMAIN DATA TABLE REPORT

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

Model Forcemain Data Table 50 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

Model Forcemain Data Table 50 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB2	PMP-18A-b	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

Model Forcemain Data Table 50 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA2	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

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3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

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1791	O2L26FB1	W-26	PMP-26B	PVC	0.1	7.7	20	0.01	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA1	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

Model Forcemain Data Table 50 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
435	O2L18A-FA2	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
436	O2L18A-FA1	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 50 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3651	O2L34BYEPAS	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

EXHIBIT F.4
PRESSURE NODE DATA TABLE REPORT

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE
1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT F.5
PUMP MODEL DATA TABLE REPORT

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
482	PMP-4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)
49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9
64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT F.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 50 Units Per Acre
Exhibit F6

ID	Label	Elev (Grd) (ft)	Elev (Invt) (ft)	Boundary Condition Type	Elev (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1019.9	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3723.9	Measured 10 psi or 23 feet of Head on monday 6/12/2023

EXHIBIT G
PUMP INVENTORY TABLE

Pump Inventory Table

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Park Lake Estates	Lake Shore Drive	Pub	**LS #1**	1	Sulzer	xfp100E-CB1.5-PE56/4-E-60FM	0016055 42/2012	3	230	7.5	19.8	1757	713	65.6	2022	7.68	262	42	BPI Unitron Controls	Pump Definition - 32 (PMP-45)LS1
Park Lake Estates	Lake Shore Drive	Pub	**LS #1**	2	Sulzer	xfp100E-CB1.5-PE56/4-E-60FM	0016055 42/2012	3	230	7.5	19.8	1757	713	65.6	2022	7.68	262	42	BPI Unitron Controls	Pump Definition - 32 (PMP-45)LS1
Park Lake Estates	Marine Circle	Pub	**LS#2**	1	Sulzer	XFP80C-CB1.2-PE20/6-C-60FM	0023652 40/2013	3	230	2.7	8.4	1150	500	9	2013	7.68	140	18	Champion	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	Marine Circle	Pub	**LS#2**	2	Sulzer	XFP80C-CB1.2-PE20/6-C-60FM	0021027 40/2013	3	230	2.7	8.4	1150	500	9	2013	7.68	140	18	Champion	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	West Lake Shore Dr	Pub	**LS#3**	1	Sulzer	ABSXFP-PE2	300698673	3	230	7.5		1757 MAX	713	66	2022	0.195	275	40	UNITRON	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	West Lake Shore Dr	Pub	**LS#3**	2	ABS	XFP-PE2-100E-CB1.5-PE56_4EFM	300688962	3	230	7.5			713	66	2021	0.195	275	40	UNITRON	Pump Definition - 6 (PMP-32)LS2
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#4**	1	ABS	AFPK1041M46/4EX	6980	3	230	6.2	17.1	1750	780	59		0.2	132	46	Champion	Pump Definition - 16 (PMP-46)LS4
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#4**	2	ABS	AFPK1041 M46/4EX	69803	3	230	6.2	17.1		780	59			132	46	Champion	Pump Definition - 16 (PMP-46)LS5
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#5**	1	ABS	AFPK0841.4-M18/4FW	0091195	1	230	2.7	12	1146	305	20	2007	152mm	95	12	Champion	Pump Definition - 18 (PMP-38)LS5
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#5**	2	Liberty	XFP80CB1.4PE 20/6 LSG202M-C	124QWC	1	230	2.4	12.1	1750	305	20	2019	152mm	95	12	Champion	Pump Definition - 18 (PMP-38)LS6

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
La Siesta	Lake Shore Drive	Pub	**LS#6**	1	ABS	20-35 MOBILE HOME / AFPK0841.3M18/4EX		3			1		410	28			92	20	Champion	Pump Definition-4-LS6
La Siesta	Lake Shore Drive	Pub	**LS#6**	2	ABS	20-35 MOBILE HOME / AFPK0841.3M18/4EX		3		2.4			410	28			92	20	Champion	Pump Definition-4-LS6
Lone Pine	10th St.	Pub	**LS#7**	1	Sulzer	XFP100C-CB1_4-pe35/4-60HZ		3	230		13.7		635	49			210	28	Champion	Definition - 26 (PMP-42)LS7
Lone Pine	10th St.	Pub	**LS#7**	2	Sulzer	XFP100C-CB1_4-pe35/4-60HZ		3	230	4.7			635	49			210	28	Champion	Definition - 26 (PMP-42)LS7
removed	removed	Pub	**LS#8**	1																
removed	removed	Pub	**LS#8**	2																
ParkRD	Park Rd	Private	**LS#9**	1	Gorman-Rupp	T3A-B		3	240	5		1250	418	45			150	37	Gorman-Rupp	Pump Definition-5-LS-9
Park RD	Park Rd	Private	**LS#9**	2	Gorman-Rupp	T3A-B		3	240	5		1250	418	25			150	37	Gorman-Rupp	Pump Definition-5-LS-9
SW 30th Street	SW 30th St	Private	**LS#10**	1	Goulds	WS0512BF	WS0512BF	1	230	0.5	7.3	1750	160	25		5	25	23		Pump Definition - 10 (PMP-34)
SW 30th Street	SW 30th St	Private	**LS#10**	2	Goulds	WS0512BF	WS0512BF	1	230	0.5	7.3	1750	160	25		5	25	23		Pump Definition - 10 (PMP-34)
SW 30th Street	SW 30th St	Private	**LS#11**	1	HYDromatic	30 MP	2248-569	NA	NA	NA	NA	1800	NA	NA	NA	NA	NA	NA	NA	PMP11A
SW 30th Street	SW 30th St	Private	**LS#11**	2	HYDromatic	31 MP	2248-570	NA	NA	NA	NA	1800	NA	NA	NA	NA	NA	NA	NA	PMP11B
SW 30th Street	SW 30th St	Private	**LS#12**	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP12A
SW 30th Street	SW 30th St	Private	**LS#12**	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP12B
SW 30th Street	SW 30th St	Pub	**LS#13**	1	Gorman-Rupp	T4A3-B	1561914	3	230	10	24.4	1760	NA	60	NA	NA	NA	NA	Fair	PMP13A
SW 30th Street	SW 30th St	Pub	**LS#13**	2	Gorman-Rupp	T4A3-B	1561914	3	230	10	24.4	1760	NA	60	NA	NA	NA	NA	Fair	PMP13B
Peninsula	Hallandale Beach Blvd	Pub	**LS#14**	1	Gorman-Rupp	T6A60SB	1753320	3	240	30	125	1350	540	75	NA	NA	NA	NA	NA	PMP14A

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Peninsula	Hallandale Beach Blvd	Pub	**LS#14**	2	Gorman-Rupp	T6A60SB	1753320	3	240	30	125	1350	540	75	NA	NA	NA	NA	NA	PMP14B
SW 30th Street	SW 30th St	Pub	**LS#15**	1	Goulds	WS0712BHF	520150	3	230	0.75	12.6	Na	200	80	NA	NA	74	54	NA	PMP15A
No Second pump			**LS#15**																	
Alabama Street	Alabama St	Pub	**LS#16**	1	ABS	AFPK1049 M75/4	M75/4	3	230	10.1	26.1	1750	850	90	NA	NA	NA	NA	NA	PMP16A
Alabama Street	Alabama St	Pub	**LS#16**	2	Sulzer	AFPK1049 M75/4	M75/5	3	230	10	26.1	1750	850	90	NA	NA	NA	NA	NA	PMP16B
SW 52nd Ave.	52nd Ave	Pub	**LS#17**	1	Gorman-Rupp	T6A3S-B/F	1760411	3	230	30	125	1350	1400	90	NA	NA	NA	NA	NA	PMP17A
SW 52nd Ave.	52rd Ave	Pub	**LS#17**	2	Gorman-Rupp	T6A3S-B/F	1760411	3	230	30	125	1350	1400	90	NA	NA	NA	NA	NA	PMP17B
Holiday RV Park	Holliday Park Ave	Pub	**LS#18**	1	ABS	S10/4W.02 06087144	00318852	1	230	1.3	6.5	1700	36	32	NA	NA	NA	NA	NA	PMP18A
Holiday RV Park	Holliday Park Ave	Pub	**LS#18**	2	ABS	S10/4W.02 06087144	00318852	1	230	1.3	6.5	1700	36	32	NA	NA	NA	NA	NA	PMP18B
Holiday RV Park	SW 6th St	Pub	**LS#18 A**	1	Hydromatic	S3HRC300M2-2	S00742073	1	230	3	17.9	3450	200	24	NA	4	85	9	UNITRON	PMP18A-A
Holiday RV Park	SW 6th St	Pub	**LS#18 A**	2	Hydromatic	S3HRC300M2-2	S00742074	1	230	3	17.9	3450	200	24	NA	4	85	9	UNITRON	PMP18A-A
Coca Cola	Pembroke Rd	Pub	**LS#19**	1	Sulzer	XFP15OG-CB1.7-PE185/4	2773859	3	460	24.8	32.7	1750	1500	95	NA	NA	880	58	SULZER	PMP-19A
Coca Cola	Pembroke Rd	Pub	**LS#19**	2	ABS	AFPK1547 ME185/4	22166	3	460	24.8	32.7	1750	1500	95	NA	NA	880	58	SULZER	PMP-19B
removed	removed		**LS#20**	1		Does not exist														
removed	removed		**LS#20**	2		Does not exist														
removed	removed		**LS#21**	1		Old Master LS DOES NOT EXIST														
removed	removed		**LS#21**	2		Old Master LS DOES NOT EXIST														
Lakeview Park	1st St.	Pub	**LS#22**	1	Sulzer	XFP-PE2-100E-CB1.4-PE75_4E-FM	300357575	3	230	10	20	1762	450	85	NA	0.217	175	60	SULZER	PMP-22A
Lakeview Park	1st St.	Pub	**LS#22**	2	Sulzer	XFP-P2-100E-CB1.4-PE75_4E-FM	300698704	3	230	10	20	1762	450	85	NA	0.217	175	60	SULZER	PMP-22B
SW 30th Ave	SW 30th AVE	Pub	**LS#23**	1	ABS	AFPK1041.3M35/4e	92942	3	230	4.7	13.8	1780	700	44	NA	0.3	78	41	CHAMPION	PMP-23A
SW 30th Ave	SW 30th AVE	Pub	**LS#23**	2	ABS	AFPK1041.8M 35/4E	92942	3	230	4.7	13.8	1780	700	44	NA	0.3	78	41	CHAMPION	PMP-23B
Green Acres	7th St	Pub	**LS#24**	1	ABS	AFPK0841 M1.5/6EX	91275	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-24A
Green Acres	7th St	Pub	**LS#24**	2	ABS	AFPK0841M1.5/6EX	91276	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-24B

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Green Acres	4th St	Pub	**LS#25**	1	ABS	AFPK0841 M1.5/6	0891283	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-25A
Green Acres	4th St	Pub	**LS#25**	2	ABS	AFPK0841 M1.5/6	0891282	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-25B
Lakeview Park	5th St	Pub	**LS#26**	1	ABS	AFPK0841 M1.8/4EX	300466132	1	230	2.4	12.1	1750	560	28	8/17/2022	NA	63	12	CHAMPION	PMP-26A
Lakeview Park	6th St	Pub	**LS#26**	2	Sulzer	XFP-PE1-100C-C1.4-PE20-6C-FM	3055801	1	230	2.4	12.1	1750	560	23	8/18/2022	NA	63	12	CHAMPION	PMP-26B
removed	removed	NA	**LS#27**	1	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-27A
removed	removed	NA	**LS#27**	2	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-27B
removed	removed	NA	**LS#28**	1	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-28A
removed	removed	NA	**LS#28**	2	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-28B
Bamboo Park	24th St	Pub	**LS#29**	1	Sulzer	XFP-PE1-100C-CB1.4-PE20_6WC-FM	3135037	1	230	2.4	12	1146	471	23	2/27/2023	7.09	137	17	CHAMPION	PMP-29A
Bamboo Park	25th St	Pub	**LS#29**	2	Sulzer	XFP100C-1-CB1.4-PE20/6W.C.60FM	0030673	1	230	2.68	12	1146	471	23	NA	7.09	137	17	CHAMPION	PMP-29A
Bamboo Park	SW 30th CT	Pub	**LS#30**	1	ABS	AFP0831 M28/4W 60HZ	NA	3	240	2	9	NA	240	28	NA	NA	52	25	CHAMPION	PMP-30A
Bamboo Park	SW 30th Ct	Pub	**LS#30**	2	ABS	AFP0831 M28/4W 60HZ	NA	3	240	2	9	NA	240	28	NA	NA	52	25	CHAMPION	PMP-30B
SW 31st Ave	SW 31 St.	Pub	**LS#31**	1	ABS	AFPK1049.4-M75/IMP 228 mm	069195	3	480	10	26.1	NA	850	90	NA	NA	220	87	CHAMPION	PMP-30
SW 31st Ave	SW 31 St.	Pub	**LS#31**	2	SULZER	XFP100E-CB1-4a-PE75	NA	3	480	10	26.1	NA	700	120	NA	NA	325	87	CHAMPION	PMP-40B
John P Curcie	Irwin Lehmann Dr	Pub	**LS#32**	1	ABS	M35/4-12.60.03214991	0091247	3	208	4.7	15.1	1750	501	42.8	NA	NA	145	32	CHAMPION	PMP-26B
John P Curcie	Irwin Lehmann Dr	Pub	**LS#32**	2	ABS	M35/4-12.60.03214992	0091248	3	208	4.7	15.1	1750	501	42.8	NA	NA	145	32	CHAMPION	PMP-26B
SW 30th St.	SW 30th St.	Private	**LS#33**	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-26B
SW 30th St.	SW 30th St.	Private	**LS#33**	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-26B
Master Station 2800 Park Rd	Park Rd	Pub	**LS#34**	1	ABS	AFP1002ME350/4D	03574	3	480	41.5	55	1760	1500	190			975	106	CHAMPION	PMP-33A
Master Station 2800 Park Rd	Park Rd	Pub	**LS$34**	2	Sulzer	XFP-PE4-100J-CH1-PE350_4J-FM	300661886	3	460	46.9	55	1783	850	110			975	106	CHAMPION	PMP-34B

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Master Station 2800 Park Rd	Park Rd	Pub	**LS#34**	3	ABS	AFP1002ME350/4D	037575	3	480	41.5	55	1760	1500	190			975	106	CHAMPION	PMP-35C
PEMBROKE COMMERCE CENTER	PRIVATE	PUB	**LS#35**	3	EMU	FA10.33 238T 172-4/16	491894	3	230	10	28	1740	460	100			171	81	CC CONTROL	PMP-35A
PEMBROKE COMMERCE CENTER	PRIVATE	PUB	**LS#35**	3	EMU	FA10.33 238T 172-4/17	NA	3	230	10	28	1740	460	100			171	81	CC CONTROL	PMP-35B
Seneca	Senic Phase 3	Private	**LS#36**	1	WILO	FA10.51E	NA	3	230	8.5	18.7	1740	725	30			50	27	NA	PMP-36A
Seneca	Senic Phase 4	Private	**LS#36**	2	WILO	FA10.51E	NA	3	230	8.5	18.7	1740	725	30			50	27	NA	PMP-36B
SW 55th Ave	SW 55th St	Pub	**LS#37**	1	Sulzer	ABS PIRANHA S20/2	0400497	1	240	2	11.5	3400	43	109			50	27	CHAMPION	PMP-37A
SW 55th Ave	SW 55th St	Pub	**LS#37**	2	HOMA	GRP16/1	NA	1	230	1.6	8	3450	85	83			50	27	CHAMPION	PMP-37B
Senica Commerce Park	Senica Commerce Park	Pub	**LS#38**	1	FLYGT	FP 3085.183	NA	3	480	3	NA	1710	225	24			200	21	NA	PMP-38A
Senica Commerce Park	Senica Commerce Park	Pub	**LS#38**	2	FLYGT	FP 3085.184	NA	3	480	3	NA	1710	225	24			200	21	NA	PMP-38B
West Wind	SW 20th St	Private	**LS#39**	1	MYERS	WGX20-03	NA	1	220	2	NA	3450	70	130			28	26	NA	PMP-39A
West Wind	SW 20th St	Private	**LS#39**	2	MYERS	WGX20-03	NA	1	220	2	NA	3450	70	130			28	26	NA	PMP-39B
School	48th Street	Private	**LS#40**	1	EMU	FA-104	NA	3	230	7.5	NA	1740	600	100		238	139	86	NA	
School	49th Street	Private	**LS#40**	2	EMU	FA-105	NA	3	230	7.5	NA	1740	600	100		238	139	86	NA	
Service Station	SW 33 AVE	Private	**LS#41**	1	HYDromatic	SPGA GRINDER	NA	1	230	2		3500	105	135			50	105	NA	
Service Station	SW 33 AVE	Private	**LS#41**	2	HYDromatic	SPGA GRINDER	NA	1	230	2		3500	105	135			50	105	NA	
Marathon	55th AVE	Private	**LS#42**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Marathon	56th AVE	Private	**LS#42**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bar-Club	SE56th/Hallendale Bch BLVD	Private	**LS#43**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bar-Club	SE56th/Hallendale Bch BLVD	Private	**LS#43**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Dollar General	SW48th St Int Hallandale	Private	**LS#44**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dollar General	SW48th St Int Hallandale	Private	**LS#44**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
APARTMENTS	3740 HALLANDALE BLVD	Private	**LS#45**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
APARTMENTS	3741 HALLANDALE BLVD	Private	**LS#46**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TOWN REC CENTER	31ST PLACE	Private	**LS#47**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TOWN REC CENTER	32nd PLACE	Private	**LS#48**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dollar General	SW48th St Int Hallandale	Private	**LS#48**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

EXHIBIT H
LETTER REQUEST FOR ADDITIONAL SEWER ALLOCATION

CRAIG A. SMITH & ASSOCIATES
A SMART-INFRASTRUCTURE COMPANY

December 11, 2023

The Town of Pembroke Park

Future Sewage Use Treatment Capacity Allocation

The Town of Pembroke Park has experienced significant growth in the last decade. Due to this growth, and projected future growth, it is in the best interest of the Town to seek additional sewage allocation above the existing allocation of 1.11 Million gallons per day as per the Large Users Agreement with the City of Hollywood. The current and projected flows are computed utilizing an analysis of the town code 13.5-52 wastewater treatment loads and the current Official Zoning Map in conjunction with the Southern Regional Wastewater Treatment Plant Large User Capacity Report.

Current Flow Projections as per Zoning:

- T-1 Trailer Park (16 units/acre) (313acres) (90 Gal/Acre) : 450,720 GPD
- RM-25 Medium High Density Multiple-Family Residential (5 Acres) (25 units/acre) (225 Gal/unit) : 28,125 GPD
- RM-16 Medium Density Multiple-Family Residential (107 Acres) (16 units/acre) (225 Gal/unit): 385,200 GPD
- Industrial (40% lot occupation) (0.1 Gal/SF) (6,324,910 SF): 632,491 GPD
- Restaurants (500 seats)(33 Gal/seat): 16,500 GPD
- Clubs (300 seats)(18 Gal/seat): 5,400 GPD
- Service Stations (94 Pumps) (90 Gal/pump): 8,460 GPD
- Laundry Mats (48 washing machines) (360 Gal per Machine): 17,280 GPD
- Churches (300 seats) (3 Gal/seat): 3,000 GPD
- Schools (2000 Students) (18/student): 36,000 GPD
- Senior Facility (300 Beds) (90 Gal/bed): 27,000 GPD
- Retail (140 acres of which 100 acres General Retail is utilized not including prior listed Retail i.e. clubs, restaurants..) (0.1 Gal/SF): 175,000 Gal/Day

The current total wastewater usage based on said analysis: 1,785,176 GPD

Future Projections:

- If half the T-1 units were to rezone from T-1 to RM-25 and additional 550,000 Gal/Day will need to be allocated to the town to service this growth.

Future Wastewater Usage based on said analysis: 2335176 GPD.

Based on this analysis the Town of Pembroke Park should seek additional Sewage Treatment Capacity Allocations.

Sincerely,

Daniel E. Shonk

Daniel Eugene Shonk P.E.

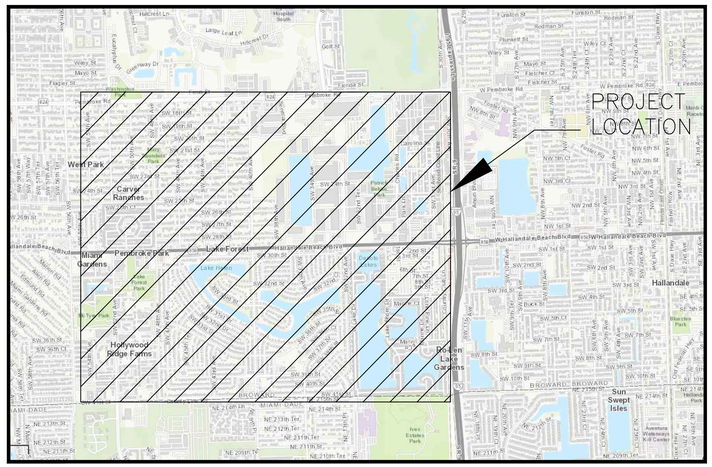


954. 782.8222
1425 E. Newport Center Drive
Deerfield Beach, FL: 33442

EXHIBIT I
2025 TOWN ATLAS

UPDATED WASTEWATER
MASTER PLAN ATLAS

LOCATION MAP



TOWN OF PEMBROKE PARK
FLORIDA
The Small Town that Means Big Business

BOARD OF COMMISSIONERS

MAYOR	MAYOR ASHIRA MOHAMMED, DISTRICT 5
VICE MAYOR	ERIK MORRISSETTE, DISTRICT 1
CLERK COMMISSIONER	WILLIAM R. HODGKINS, DISTRICT 2
ACTING CLERK COMMISSIONER	MUSFIKA KASHEM, DISTRICT 4
COMMISSIONER	GEOFFREY JACOBS, DISTRICT 3

SHEET INDEX

NUMBER / SHEET		DESCRIPTION
01	C-01	COVER SHEET
02	C-02	KEY SHEET & SITE PLAN
03 - 14	C-03 - C-14	MASTER PLAN ATLAS

PREPARED FOR:

TOWN OF PEMBROKE PARK

PROJECT No. 08-22-025

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
21045 COMMERCIAL TRAIL - BOCA RATON, FLORIDA 33486
(561) 314-4445 WWW.CRAIGASMITH.COM
CERTIFICATE OF AUTHORIZATION NUMBER: LB0003110

FILE NAME: 08-22-025-C-01-COVER.dwg

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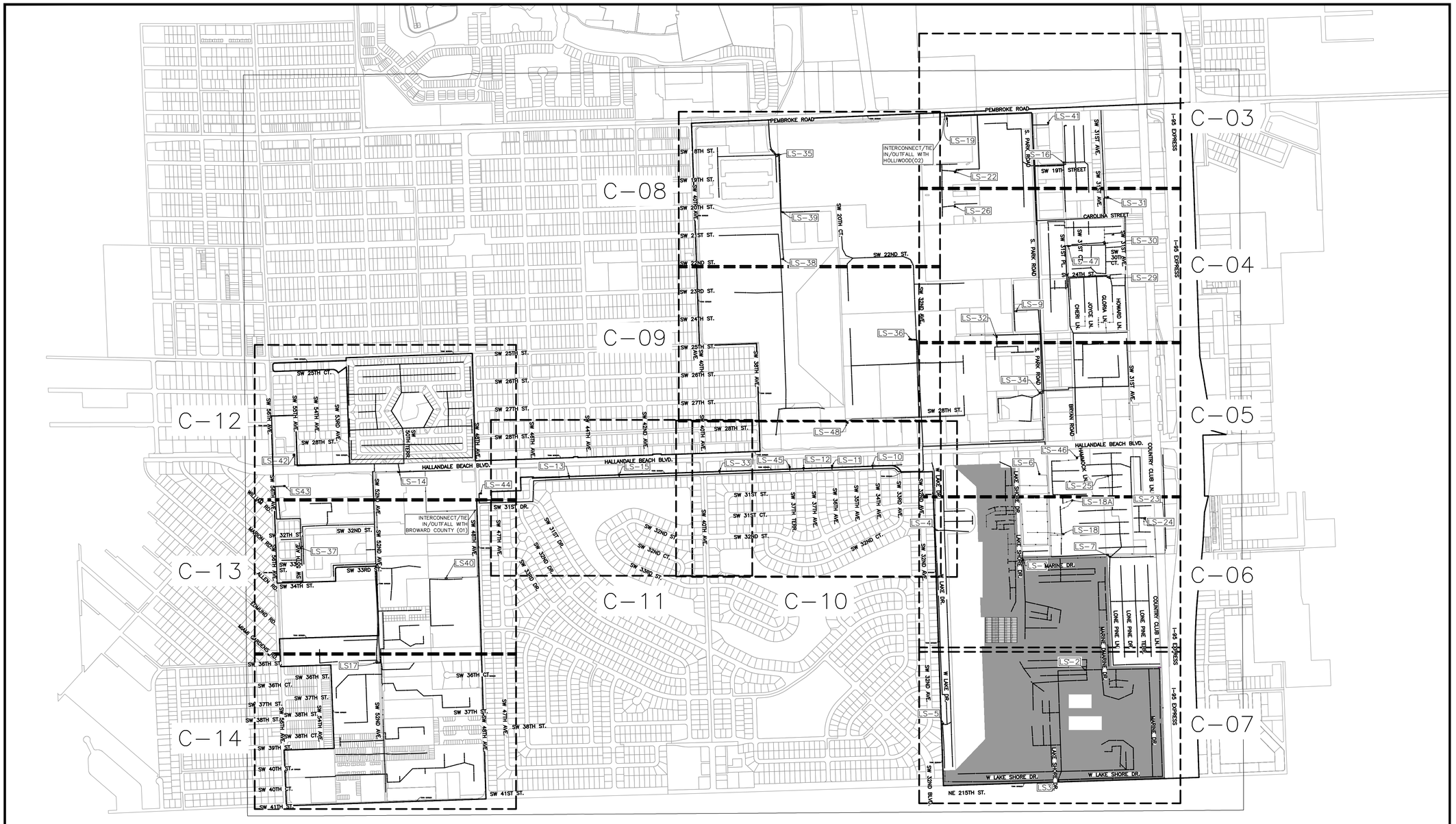
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BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
03 OF 14

LEGEND:

-1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

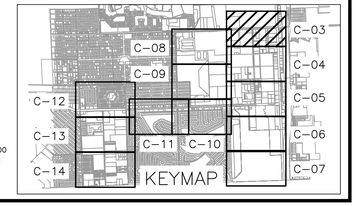
UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-03 FOR CONTINUATION

SEE SHEET C-08 FOR CONTINUATION

SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

LS-26

LS-31

LS-30

LS-47

LS-29

LS-9

LS-32

CAROLINA STREET

S. PARK ROAD

I-95 EXPRESS

SW 31ST CT.

SW 31ST PL.

SW 31ST AVE.

SW 30TH CT.

SW 24TH ST.

SW 25TH ST.

SW 32ND AVE.

CHERI LN.

JOYCE LN.

GLORIA LN.

HOWARD LN.

SEE TABLE FOR INFO

OWNER REPLACED ALL 4"&6" VCP WITH 8" PVC IN BAMBOO PARADISE

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S1	02L345A12	8"	CLAY	39'
S2	02L345Q1	4"	CLAY	89'
S3	02L345P1	4"	CLAY	14'
S4	02L345A13	8"	CLAY	126'
S5	02L345S1	4"	CLAY	86'
S6	02L345R1	4"	CLAY	16'
S7	02L345A14	8"	CLAY	50'

SEWER MANHOLE TABLE

NUMBER	NAME	INVERT ELEVATION
M1	M34A11	1.5'
M2	M34A12	1.7'
M3	M34Q1	3.8'
M4	M34P1	4.0'
M5	M34A13	2.1'
M6	M34S1	3.8'
M7	M34R1	3.0'
M8	M34A14	2.3'

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
04 OF 14

LEGEND:

-1.7 —— INVERT ELEVATION NAVD88

M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH

01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2

01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2

02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

FORCE MAIN PIPE

GRAVITY SEWER PIPE

GRAVITY SEWER MANHOLE

LIFT STATION WETWELL

PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP: C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14

SEE SHEET C-04 FOR CONTINUATION

SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

SW 32ND AVE.

SW 28TH ST.

SW 27TH ST.

SW 31ST AVE.

S. PARK ROAD

BRYAN ROAD

HAMMOCK LN.

COUNTRY CLUB LN.

LAKE SHORE DR.

W LAKE DR.

HALLANDALE BEACH BLVD.

TOWN BORDER

LS-34

LS-46

LS-6

LS-25

188 LF 8" PVC 02L36SD1 M36D1 230 LF 8" N/A 02L36SD2 M36D2 139 LF 8" PVC 02L36SF1 M36F1 76 LF 8" PVC 02L36SD3 M36D3

1394 LF 4" DIP 02L36F4

188 LF 8" PVC 02L36SB4 M36B4 346 LF 8" PVC 02L36SB5 M36B5 M36B3 236 LF 8" PVC 02L36SB6 M36B6

295 LF 8" DIP 02L10F1

359 LF 6" CLAY 02L45S2 491 LF 6" CLAY 02L45S6 100 LF 6" CLAY 02L45S3 M4G3 M4G2 M4A6

243 LF 8" PVC 02L32SB2 M32A1 M32C1 73 LF 8" PVC 02L32SA3 M32A2 179 LF 8" PVC 02L32SA4 M32A4 M32A3 27 LF 8" PVC 02L32SC1 M32D1 78 LF 8" PVC 02L32SD1 M32C2 151 LF 6" PVC 02L32SC2

681 LF 4" DIP 02L32F1

2007 LF 8" PVC 02L34F5

02L34F6 46 LF 8" DIP

02L34J6

29 LF 12" N/A 02L34SA1

114 LF 8" PVC 02L34SB1

146 LF 8" PVC 02L34SB4 139 LF 8" PVC 02L34SB3 123 LF 8" PVC 02L34SB2 M34B4 M34B3 M34B2 M34B1 M34A1 02L36F1 48 LF 8" DIP 16 LF 12" DIP 02L34SA2 02L34J5

76 LF 8" PVC 02L34SB5 M34B5

286 LF 8" PVC 02L34SD1 580 LF 12" PVC 02L34SC1 585 LF 8" DIP 02L36F2

M34D2 02L34SD2 139 LF 8" PVC M34D1 M34C1

152 LF 12" PVC 02L34SC2

308 LF 12" CLAY 02L34SC5 M34C5 M34C2 309 LF 12" CLAY 02L34SC4 M34C3 31 LF 8" PVC 02L34SC3 02L36J2

1431 LF 8" DIP 02L36F3 02L36J3

02L18F1

130 LF 8" DUCTILE IRON

02L18J1

101 LF 8" PVC 02L18ASA8 02L46J1 102 LF 8" PVC 02L46SA1 M18A-A7 M18A-A8 213 LF 2" PVC 02L46F1 02L46F2 130 LF 8" PVC 02L46SA7 147 LF 8" PVC 02L18SA6 316 LF 8" PVC 02L18ASD1 M18A-A6 M18A-D1 396 LF 8" PVC 02L18ASC1 M18A-A5 M18A-C1 127 LF 8" PVC 02L18ASA5 112 LF 8" PVC 02L18ASA4 M18A-A4 02L18ASB1 280 LF 8" PVC M18A-B1

146 LF 8" PVC 02L1SA1 M1A11 M1A10 221 LF 8" CLAY 02L1SN10 188 LF 4" CLAY 02L1SI1 M1I11 77 LF 6" CLAY 02L1SHH1 M1I1 M1HH1 M1A9 180 LF 4" CLAY 02L1SH2 256 LF 8" CLAY 02L1S9 02L6F1 631 LF 4" PVC 02L6J1

02L18F2 1013 LF 8" CIP

301 LF 8" CLAY

M34K1 410 LF 6" CLAY 02L34SK2 M34K2 291 LF 8" CLAY 02L34SK4 316 LF 8" CLAY 02L34SK3 182 LF 6" CLAY 02L34SI2 104 LF 6" CLAY 02L34SI1 M34J1 M34A7 M34H3 M34F3 261 LF 6" CLAY 02L34SH3 194 LF 6" CLAY 02L34SI3 332 LF 8" CLAY 02L34SK5 281 LF 8" CLAY 02L34SF3 M34J2 M34I1 169 LF 6" CLAY 02L34SI1 M34H1 195 LF 6" CLAY 02L34SH2 M34H2 109 LF 8" CLAY 02L34SH1 324 LF 8" CLAY 02L34SF1 304 LF 8" CLAY 02L34SF2 M34F1 M34F2 77 LF 8" CLAY 02L34SA6 23 LF 8" CLAY 02L34SA5 M34A5 M34A6 307 LF 8" PVC 02L34SA4 M34A4 M34A3 26 LF 8" PVC 02L34SA3 02L34BYPASS 15 LF INACTIVE BYE-PASS 8" DIP 02L36J1

335 LF 10" PVC 02L34SE1 401 LF 6" CLAY 02L34SG1 M34E1 213 LF 6" PVC 02L34SE2 M34E2 M34G1

212 LF 6" CLAY 02L25SC2 M25C2 M25C1 116 LF 4" CLAY 02L25SD1 M25D1 134 LF 6" CLAY 02L25SC1 107 LF 8" CLAY 02L25SA3 111 LF 8" CLAY 02L25SA6 M25A6 M25A5 129 LF 8" PVC 02L25SA5 293 LF 6" CLAY 02L25SE1 M25E1 M25A2 M25A3 725 LF 8" PVC 02L25SA4 M25A4 133 LF 8" CLAY 02L25SA2 149 LF 8" CLAY 02L25SA1 116 LF 4" CLAY 02L25SF1 M25F1 304 LF 6" CLAY 02L25SG1 M25G1 M25 A1 149 LF 8" CLAY 02L25SB1 02L25J1 158 LF 6" CLAY 02L25SH1 M25H1 02L25F1 105 LF 4" CLAY 02L25SI1 M25 B1 M25I1 596 LF 3" PVC 02L25SB2 668 LF 8" CLAY 02L25SK1 945 LF 8" PVC 02L25SK2 400 LF 8" PVC 02L25SA7 M25A7 M25K1

401 LF 8" CLAY 02L23SB2 M23B2 M23B1

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
05 OF 14

LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:
- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP: C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14

SEE SHEET C-05 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION



GRAVITY PIPE TABLE

NUMBER	NAME	INVERT EL.
M1	M1A4	1.0'
M2	M1S1	1.8'
M3	M1S2	2.5'
M4	M1S3	4.0'
M5	M1T1	4.0'
M6	M1U1	2.6'
M7	M1U2	3.6'
M8	M1U3	4.5'
M9	M1VI	3.0'
M10	M1V2	4.0'
M11	M1X1	4.0'
M12	M1A5	1.1'
M13	M1Y1	0.0'
M14	M1W1	4.0'
M15	M1A6	1.4'
M16	M1Z1	4.0'
M17	M1AA1	4.0'
M18	M1A7	1.7'
M19	M1BB1	2.4'
M20	M1KK1	3.5'
M21	M1KK2	4.5'
M22	M1EE1	2.9'
M23	M1EE3	4.0'
M24	M1EE2	4.0'
M25	M1BB2	3.0'
M26	M1CC1	3.5'
M27	M1DD1	4.0'
M28	M1CC2	4.0'
M29	M1BB3	3.9'
M30	M1BB4	5.1'
M31	M1A8	1.9'
M32	M1GG1	4.0'
M33	M1FF1	4.0'

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S1	02L1SS1	6"	CLAY	121'
S2	02L1SS2	4"	CLAY	60'
S3	02L1SS3	4"	CLAY	58'
S4	02L1ST1	4"	CLAY	60'
S5	02L1SU1	6"	CLAY	84'
S6	02L1SU2	4"	CLAY	53'
S7	02L1SU3	4"	CLAY	58'
S8	02L1SV1	4"	CLAY	43'
S9	02L1SV2	4"	CLAY	15'
S10	02L1SW1	4"	CLAY	99'
S11	02L1SA5	8"	CLAY	43'
S12	02L1SY1	4"	CLAY	15'
S13	02L1SX1	4"	CLAY	57'
S14	02L1SA6	8"	CLAY	73'
S15	02L1SZ1	4"	CLAY	14'
S16	02L1SAA1	4"	CLAY	65'
S17	02L1SA7	8"	CLAY	47'

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S18	02L1SBB1	6"	CLAY	90'
S19	02L1SKK1	4"	CLAY	48'
S20	02L1SKK2	4"	CLAY	131'
S21	02L1SEE1	4"	CLAY	49'
S22	02L1SEE3	4"	CLAY	28'
S23	02L1SEE2	4"	CLAY	63'
S24	02L1SBB2	6"	CLAY	127'
S25	02L1SCC1	4"	CLAY	47'
S26	02L1SDD1	4"	CLAY	42'
S27	02L1SCC2	4"	CLAY	78'
S28	02L1SBB3	4"	CLAY	118'
S29	02L1SBB4	4"	CLAY	138'
S30	02L1SA8	8"	CLAY	45'
S31	02L1SGG1	4"	CLAY	15'
S32	02L1SFF1	4"	CLAY	26'

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

LEGEND:

-1.7 INVERT ELEVATION NAVD88

M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH

01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2

01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2

02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

CAS

PROJECT NUMBER
08-22-025
06 OF 14

SEE SHEET C-07 FOR CONTINUATION

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

FORCE MAIN PIPE

GRAVITY SEWER PIPE

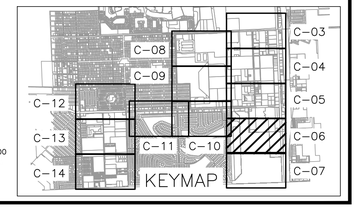
GRAVITY SEWER MANHOLE

LIFT STATION WETWELL

PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-06 FOR CONTINUATION


SW 32ND AVE.
W LAKE DR.
SW 32ND BLVD.
W LAKE SHORE DR.
LAKE SHORE DR.
MARINE DR.
I-95 EXPRESS
NE 215TH ST.
TOWN BORDER
LS-2
LS-3
LS-5
LS3
SEE TABLE FOR INFO
2688 LF 6" C.I.P.
02L3P230
02L3J1
02L5J1
02L4J2
02L4J1
02L5J2
02L5F3
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02L3SA1
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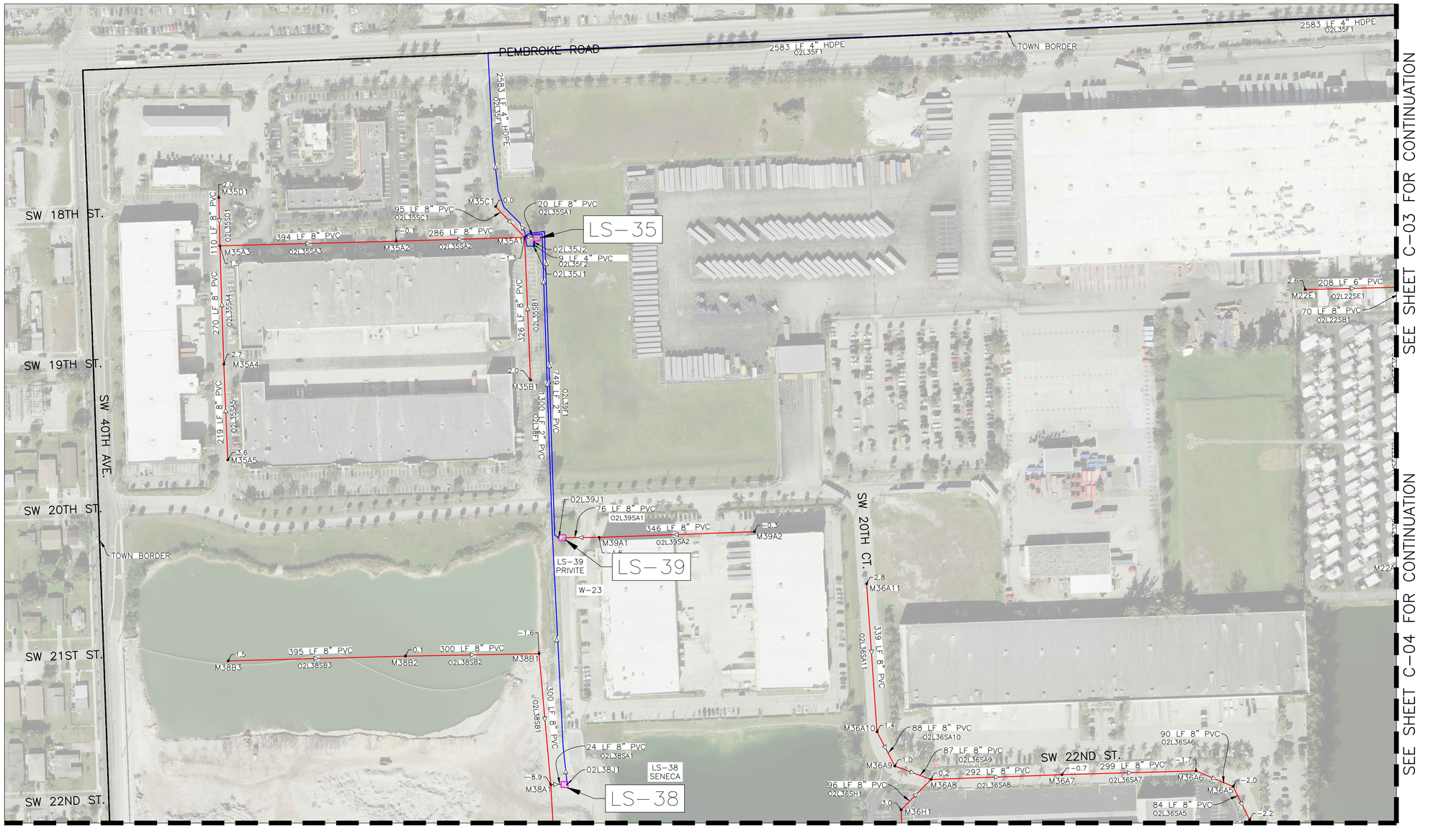


SEE SHEET C-09 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
08 OF 14

LEGEND:

-1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

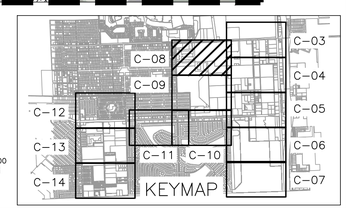
UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-08 FOR CONTINUATION



SEE SHEET C-04 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
09 OF 14

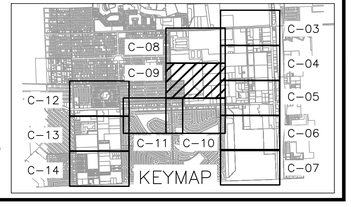
LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

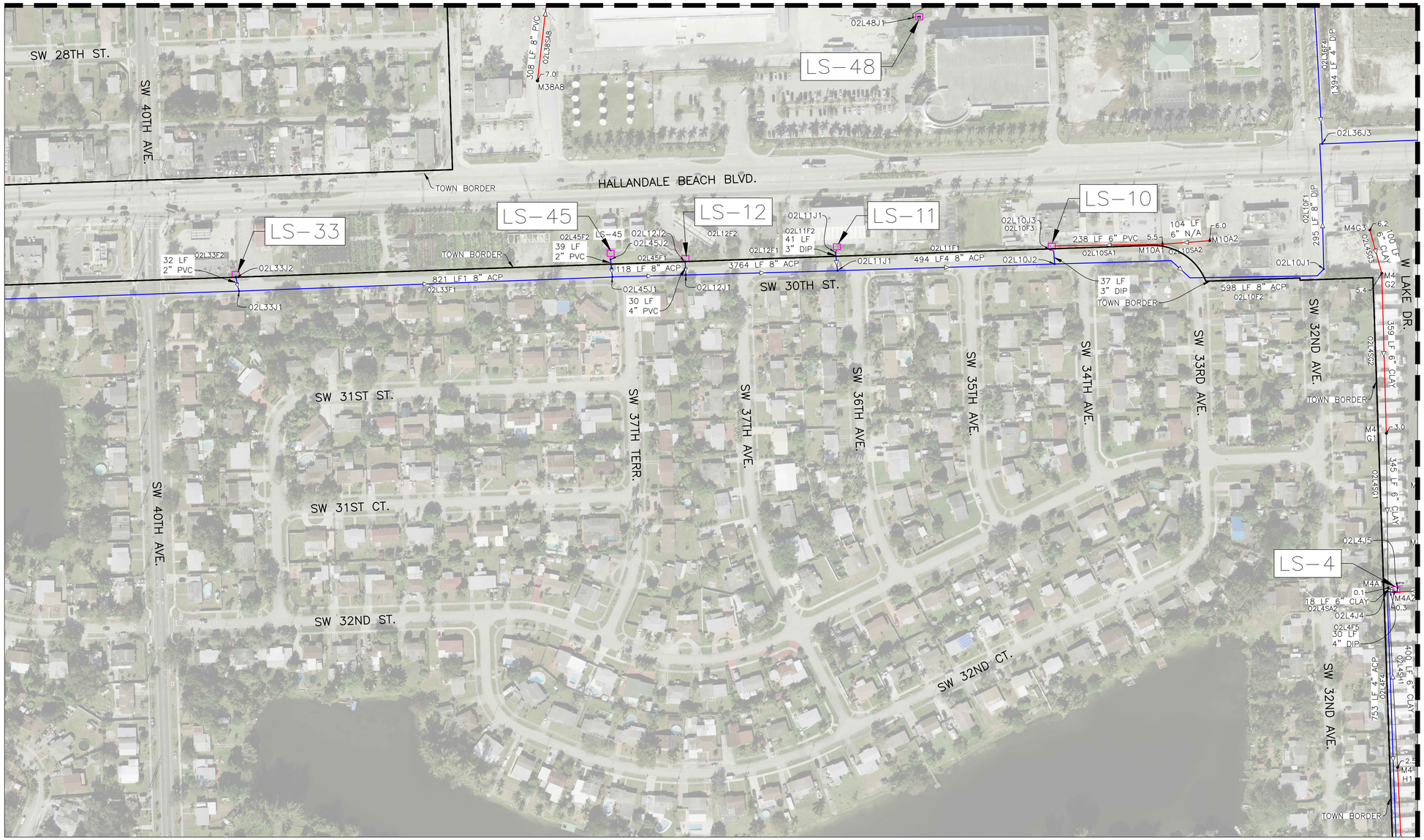
TOWN OF PEMBROKE PARK

LEGEND:
- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-09 FOR CONTINUATION



BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
10 OF 14

LEGEND:

-1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

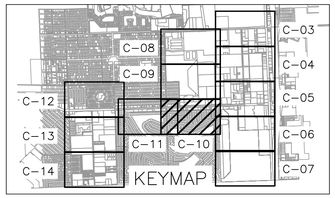
TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-12 FOR CONTINUATION

SEE SHEET C-13 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

SW 28TH ST.

SW 46TH AVE.

SW 44TH AVE.

SW 42ND AVE.

SW 40TH AVE.

TOWN BORDER

HALLANDALE BEACH BLVD.

LS-13

LS-15

LS-33

115 LF 8" PVC
02L13SA1

4.5

311 LF 8" N/A M13A1

3.2

M13A2

02L13SA2

02L13J2

02L13F2

27 LF
3" PVC

02L13J1

1330 LF 8" ACP
02L44F1

584 LF 8" ACP
02L13F1

02L15J2

02L15F2

27 LF
3" PVC

02L15J1

267 LF 8" PVC
02L15SA1

4.5

M15A1

TOWN BORDER

1181 LF 8" ACP
02L15F1

SW 30TH ST.

32 LF
2" PVC

02L33F2

02L33J2

02L33J1

SW 31ST ST.

SW 31ST DR.

SW 47TH AVE.

SW 31ST DR

SW 32ND DR.

SW 33RD DR.

SW 32ND ST.

SW 32ND CT.

SW 33RD ST.

SW 40TH AVE.

SW 31ST CT.

SW 32ND ST.

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
11 OF 14

LEGEND:

-1.7-	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP

C-03 C-04 C-05 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-13 C-14

TOWN BORDER
SEPTIC TANK
SEPTIC TANK
SEPTIC TANK
SEPTIC TANK
SW 25TH CT.
SW 25TH ST.
SW 26TH ST.
SW 27TH ST.
SW 28TH ST.
SW 56TH AVE.
SW 55TH AVE.
SW 54TH AVE.
SW 53RD AVE.
SW 50TH TERR.
SW 48TH AVE.
SW 52ND AVE.
HALLANDALE BEACH BLVD.
M14M5
M14A13
145 LF 6" CLAY
01L14SA13
M14A12
375 LF 8" CLAY
01L14SA12
M14A11
138 LF 8" CLAY
01L14SA11
M14A10
308 LF 8" CLAY
01L14SBB1
M14BB1
246 LF 8" CLAY
01L14SBB2
M14BB2
191 LF 6" CLAY
01L14SBB3
M14BB3
M14S6
286 LF 8" CLAY
01L14SS6
M14AA2
190 LF 8" CLAY
01L14SAA2
M14AA1
248 LF 8" CLAY
01L14SAA1
M14Z1
321 LF 8" CLAY
01L14SZ1
M14Z2
324 LF 8" CLAY
01L14SZ2
345 LF 8" CLAY
01L14SM5
205 LF 8" CLAY
01L14SY10
M14M4
319 LF 8" CLAY
01L14SM4
M14M3
115 LF 6" CLAY
01L14SQ1
M14Q1
M14A9
202 LF 8" CLAY
01L14SY1
M14Y1
M14X2
M14W1
118 LF 6" CLAY
01L14SW1
M14S4
280 LF 8" CLAY
01L14SS5
M14S5
130 LF 6" CLAY
01L14SR1
M14R1
249 LF 8" CLAY
01L14SG
209 LF 8" CLAY
01L14SK1
203 LF 8" CLAY
01L14SY2
209 LF 8" CLAY
01L14SS4
M14X1
M14S3
244 LF 8" CLAY
01L14SV1
M14V1
M14P1
199 LF 8" CLAY
01L14SP1
M14M2
M14A8
247 LF 8" CLAY
01L14SK8
246 LF 8" CLAY
01L14SX1
211 LF 8" CLAY
01L14SS3
M14T2
76 LF 6" CLAY
01L14ST2
M14O1
135 LF 6" CLAY
01L14SO1
216 LF 8" CLAY
01L14SM2
M14N1
327 LF 8" CLAY
01L14SN1
M14M1
294 LF 8" CLAY
01L14SM1
M14A7
248 LF 8" CLAY
01L14SS1
M14S1
288 LF 8" CLAY
01L14SS2
M14S2
276 LF 8" CLAY
01L14ST1
M14T1
85 LF 6" CLAY
01L14SU1
79 LF 6" CLAY
01L14SN2
131 LF 8" CLAY
01L14SA7
M14U1
M14N2
M14A6
64 LF 8" CLAY
01L14SA6
M14I3
M14K2
234 LF 8" PVC
01L14SK2
M14K1
261 LF 8" PVC
01L14SK1
M14A5
327 LF 8" PVC
01L14SL1
M14L1
355 LF 8" PVC
01L14SL2
M14L2
M14J4
227 LF 8" PVC
01L14SI3
58 LF 8" PVC
01L14SA4
172 LF 8" CLAY
01L14SA5
245 LF 8" PVC
01L14SJ4
68 LF 8" PVC
01L14SA3
LS-42
01L42J1
TOWN BORDER
01L14SI2
310 LF 8" PVC
M14I2
M14I1
01L14SS1
306 LF 8" PVC
M14A4
01L14SJ1
255 LF 8" PVC
M14J1
303 LF 8" PVC
01L14SJ2
M14J2
247 LF 8" PVC
01L14SJ3
M14J3
01L42F1
1075 LF 4" DIP 01L42F1
290 LF 8" CLAY
01L14SC1
M14C1
M14A2
M14A3
102 LF 8" CLAY
01L14SA2
93 LF 8" CLAY
01L14SC2
LS-42
01L40F2
01L43J1
LS43
533 LF 2" PVC
01L43J1
SW 56TH AVE.
23 LF 8" CLAY
01L14SC3
M14C3
M14C2
296 LF 8" DIP
01L17F1
01L17J1
01L14J2
01L14J3
8" DIP
01L14J3
3 LF 10"
01L14SA1
M14A1
01L14F2
307 LF 10" CLAY
01L14SB1
M14B1
286 LF 8" CLAY
01L14SB2
M14B2
LS-14
315 LF 8" CLAY
01L14SC4
M14C4
SW 52ND AVE.
01L14F2
LS-44
01L44J2
124 LF 2" PVC
01L44F2
SEE SHEET C-11 FOR CONTINUATION
SEE SHEET C-13 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

LEGEND:
FORCE MAIN PIPE
GRAVITY SEWER PIPE
GRAVITY SEWER MANHOLE
LIFT STATION WETWELL
PRESSURE JUNCTION

N
0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP
C-03
C-04
C-05
C-06
C-07
C-08
C-09
C-10
C-11
C-12
C-13
C-14

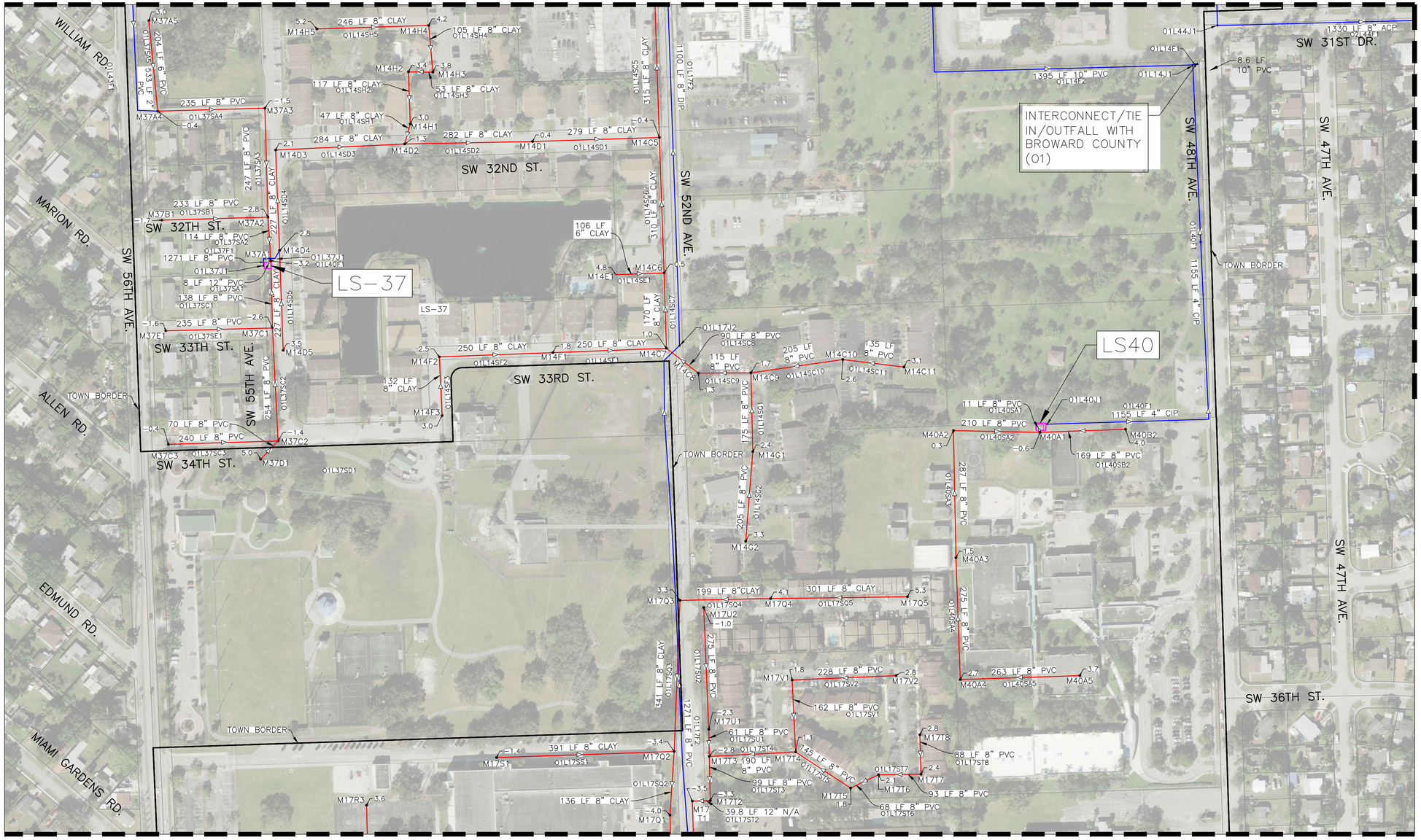
PROJECT NUMBER
08-22-025
12 OF 14

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

SEE SHEET C-12 FOR CONTINUATION

SEE SHEET C-11 FOR CONTINUATION



SEE SHEET C-14 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

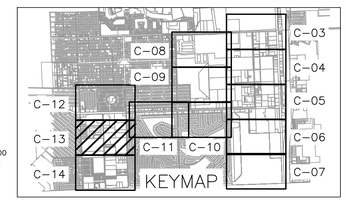
LEGEND:

-1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

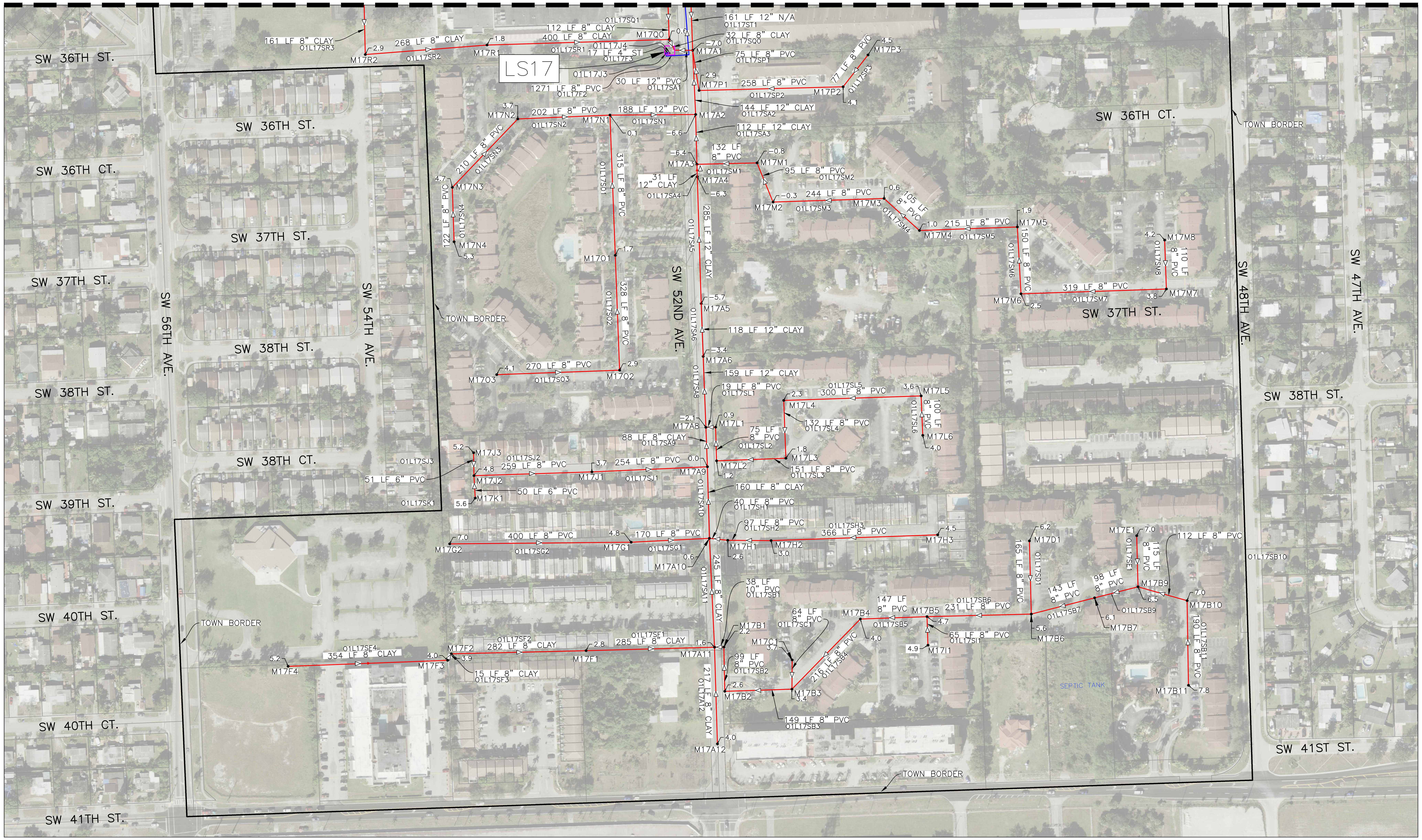


PROJECT NUMBER
08-22-025
13 OF 14

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

SEE SHEET C–13 FOR CONTINUATION



BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

CAS

PROJECT NUMBER
08–22–025
14 OF 14

LEGEND:

–1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1–LS14–SEWER BRANCH A–PIPE 2
01L14F2	FORCE MAIN: OUTFALL1–LS14–FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1–LS15–JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE

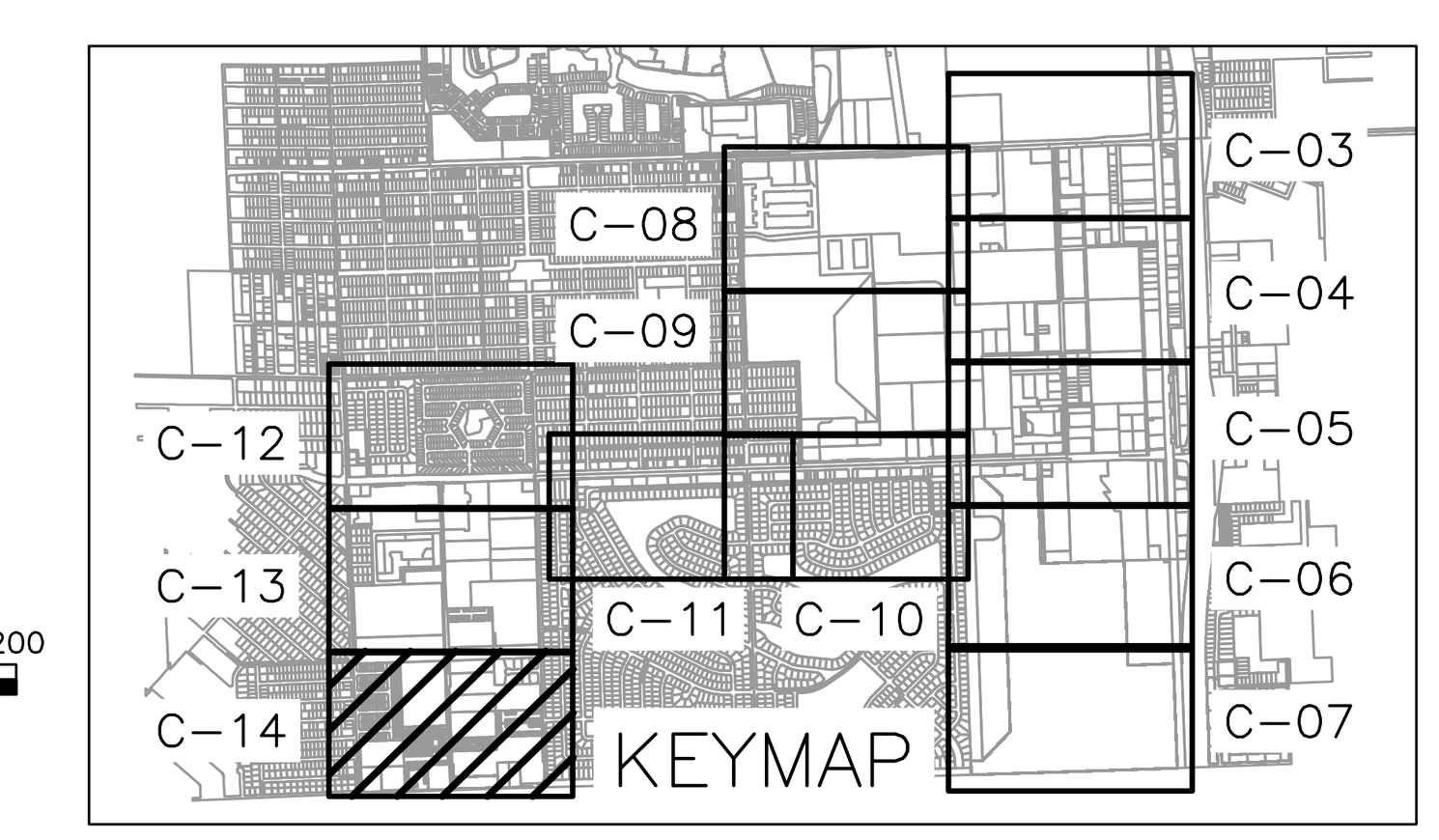


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EXHIBIT A
CITY OF HOLLYWOOD LARGE USER'S AGREEMENT

R-90-121
9/5/90

LARGE USER WASTEWATER AGREEMENT

Between

THE CITY OF HOLLYWOOD, FLORIDA

and

PEMBROKE PARK, FLORIDA

LARGE USER WASTEWATER AGREEMENT
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EXHIBITS:

A MAP OF HOLLYWOOD SYSTEM SERVICE AREA

B MAP OF PEMBROKE PARK'S SERVICE AREA

C MAP SHOWING POINTS OF CONNECTION AND METER LOCATIONS

D REPORT RELATING TO OPERATING, MAINTENANCE AND ADMINISTRATIVE COST DATA AND COMPUTATIONS AND ILLUSTRATIONS RELATING TO SAME

LARGE USER WASTEWATER AGREEMENT

THIS AGREEMENT made and entered into in Broward County, Florida, as of this 1st day of October, 1990, by and between the CITY OF HOLLYWOOD, a municipal corporation of the State of Florida (hereinafter referred to as "HOLLYWOOD"), and the PEMBROKE PARK, a municipal corporation of the State of Florida (hereinafter referred to as "PEMBROKE PARK")

W I T N E S S E T H:

WHEREAS, HOLLYWOOD and PEMBROKE PARK entered into that certain Large User Wastewater Agreement dated the 7th day of March, 1973, as amended, to provide for utilization of a common area wide wastewater collection, treatment and disposal facility (collectively the "Prior Agreement"); and

WHEREAS, the parties deem it mutually beneficial to continue to utilize the Hollywood Regional Wastewater Treatment and Disposal Facilities and the HOLLYWOOD Transmission Facilities, as such terms are defined herein; and

WHEREAS, the parties hereto have therefore determined to replace the Prior Agreement with this Agreement in order to provide for the technological advances, more stringent environmental regulations and governmental requirements which have occurred and which have caused the Prior Agreement to be inadequate to address current issues.

NOW, THEREFORE, for and in consideration of the mutual terms and conditions, promises, and covenants hereinafter set forth, HOLLYWOOD and PEMBROKE PARK agree as follows:

ARTICLE I. DEFINITIONS

Unless otherwise specifically set forth elsewhere herein, the following words and phrases used in this Agreement shall have the following meanings:

Any word or term related to "water" or "wastewater" shall have the definitions listed in the "Glossary - Water and Wastewater Control Engineering" 1981, Third Edition, published by the American Public Health Association, American Society of Civil Engineers, American Water Works Association and Water Pollution Control Federation.

1. "Annual Average Daily Flow" or "ADF" shall mean the flow determined by the total flow in gallons for a one year period divided by 365 days (or 366 days in the event of a leap year). The one year period shall be a Fiscal Year as defined herein.

2. "Consulting Engineer" shall mean that professional engineer or engineering firm selected and retained from time to time by HOLLYWOOD to perform engineering services pursuant to this Agreement.

3. "Debt Service Charges" (Treatment, Disposal and/or Transmission) shall include PEMBROKE PARK's applicable share of principal, interest, and coverage requirements on presently outstanding or new issues of revenue bonds, refunding bonds, bank financings or other obligations and including, but not limited to, bond agent fees, credit enhancement fees or service charges, heretofore or hereafter issued by HOLLYWOOD for the benefit of the Large Users and the HOLLYWOOD System. Each Large User's

applicable share of Debt Service Charges for upgrading and expansion shall be based on the formulae set forth in Article IV 2(b) hereof.

4. "Depreciation Charges" A proportionate share of the three (3%) percent per year depreciation on those portions of the HOLLYWOOD System constructed from revenues of HOLLYWOOD other than HOLLYWOOD sewer system bond proceeds and federal grants, as more particularly set forth in Article IV 2(c) below.

5. "Domestic Wastewater" shall mean such wastewater as is derived from residential dwellings, business buildings, institutions and the like.

6. "Financial Consultant" shall mean a firm of certified public accountants, engineers, economists, financial advisors, or any other qualified entity, selected by HOLLYWOOD from time to time to provide financial consultation services pertaining to this Agreement.

7. "Fiscal Year" shall mean a twelve (12) month period which commences on October 1st of each year and ends on September 30th of the following year.

8. "Hollywood Transmission Facilities" shall mean those facilities within the municipal jurisdiction of HOLLYWOOD, owned or operated, or both, by HOLLYWOOD, and shall include present facilities as well as any future facilities that are used now or will be used in the future for the purpose of transmitting wastewater to the Hollywood Treatment Facilities.

9. "Hollywood Regional Wastewater Treatment and Disposal Facilities" or "Hollywood Treatment Facilities" shall

mean those facilities owned or operated, or both, by HOLLYWOOD for the purpose of wastewater treatment and disposal, including any future additions, improvements or modifications to or extensions of these facilities that may occur from time to time, whether said facilities are within the municipal jurisdiction of HOLLYWOOD or not.

10. "Hollywood System" shall mean collectively the HOLLYWOOD Regional Wastewater Treatment and Disposal Facilities and the HOLLYWOOD Transmission Facilities, which System is hereby deemed to be a Publicly Owned Treatment Works (POTW) under 40 CFR 403. This term shall not include any physical facility that relates solely to the retail collection system of HOLLYWOOD. A map depicting the HOLLYWOOD System Service Area is attached hereto as Exhibit "A".

11. "PEMBROKE PARK System" shall mean the entire wastewater system including manholes, laterals, gravity sewers, lift stations, pumping stations, force mains, and the appurtenances thereto, and belonging to PEMBROKE PARK, whether within the corporate limits of PEMBROKE PARK or not.

12. "PEMBROKE PARK Service Area" shall mean the geographic boundaries in which: (i) PEMBROKE PARK is responsible for providing wastewater collection and transmission services to the HOLLYWOOD System, and (ii) HOLLYWOOD is responsible for providing treatment services to PEMBROKE PARK, both as more particularly described in Exhibit "B" attached hereto and made a part hereof. The parties agree that PEMBROKE PARK Service Area, as defined herein, shall also include any modifications to such

Service Area as a result of annexations, deannexations, or by mutual written agreement of the parties. Any change in PEMBROKE PARK's Service Area shall be deemed to automatically amend Exhibit B hereto, as necessary to correct the PEMBROKE PARK Service Area map.

13. "Industrial User" shall mean a user as defined in 40 CFR, as amended.

14. "Industrial Wastes" shall mean liquid wastes from any industrial process, cooling water discharge, or wastes exclusive of those which are Domestic Wastewater as defined in paragraph 5 of this Article.

15. "Infiltration and Inflow" shall mean water entering the sewer system and service connections from the ground (Infiltration) or water discharged into a sewer system or service connections from a roof, yard or street drains, cooling water discharges, manhole covers removed for storm drainage (Inflow). Infiltration and Inflow are mutually exclusive terms.

16. "Large User" shall mean any county, municipality, special district and any other entity which operates wastewater collection or transmission facilities which connect into the Hollywood System. The term "Large User" shall refer only to those counties, municipalities, special districts and other entities which have executed this form of agreement containing substantially the same terms and conditions. HOLLYWOOD shall be included within the defined term "Large User" when said term is used in conjunction with the obligations of the Large User for Debt Service Charges; Renewal, Replacement and Improvement

Account Charges; Depreciation Charges; and Operation, Maintenance and Administrative Costs; the flow projections contained in Article II hereof; the pretreatment requirements contained in Article III hereof; any penalty or compensatory charges set forth herein; and the non-monetary default provisions contained in Article VII hereof. When Hollywood is included as a Large User as set forth above, then Hollywood shall be bound by all terms, conditions, liabilities and obligations of all Large Users as set forth herein.

17. "Large Users' Advisory Committee" shall mean an advisory committee comprised of the appropriate and technically qualified representative of each of the Large Users, including HOLLYWOOD, and which shall have the rights and responsibilities set forth in Article VIII hereof.

18. "MGD" as used herein is an abbreviation for the term "million gallons per day."

19. "Operation, Maintenance and Administrative Costs" shall mean any reasonable and necessary expenses of operation, maintenance and administration of the HOLLYWOOD System, including but not limited to all HOLLYWOOD Treatment Facilities expenses, (including all costs attributable to the General Pretreatment Regulations, 40 CFR 403), allocable transmission expenses, allocable utility administration expenses, allocable utility accounting expenses, allocable general fund administration expenses, all as set forth more completely in composite Exhibit "D" attached hereto and made a part hereof.

20. "Points of Connection" shall mean those points where PEMBROKE PARK's system connects to the HOLLYWOOD System for the purpose of delivering PEMBROKE PARK's wastewater into the HOLLYWOOD System from PEMBROKE PARK's System, which points of connection are more particularly described as set forth in Article II below.

21. "Renewal, Replacement and Improvement Account Contribution" shall mean a monthly contribution, as more particularly described in Article IV 2(d) below, which contribution shall be in addition to all other charges due to HOLLYWOOD from PEMBROKE PARK, and shall be deposited into an account ("Renewal, Replacement and Improvement Account") to be established and utilized by HOLLYWOOD for renewal, replacement and improvement of the HOLLYWOOD System, as more particularly described in Article IV 2(d) below. The account established for PEMBROKE PARK shall be, through standard accounting techniques, segregated from any Renewal, Replacement and Improvement Account established by HOLLYWOOD for any other Large User.

ARTICLE II. CONNECTION TO THE HOLLYWOOD SYSTEM

1. Points of Connection.

The parties hereto agree that the points of connection of PEMBROKE PARK's System to the HOLLYWOOD System and meter locations shall be as set forth in Exhibit "C", attached hereto and made a part hereof.

2. Easement Points of Connection. HOLLYWOOD may locate the points of connection as per Exhibit "C" and provide for meter locations, and may locate meters on property currently being used by PEMBROKE PARK for wastewater transmission facilities. PEMBROKE PARK shall convey at no cost to HOLLYWOOD, an appropriate easement to the property as needed by HOLLYWOOD for the point of connection, meter locations, as necessary to provide ingress and egress to said facilities.

3. Maintenance of PEMBROKE PARK's Facilities.

a. PEMBROKE PARK agrees to keep facilities located within its Service Area or under control of PEMBROKE PARK through any agreement with the State, a county, or municipal government or authority or private party, in such condition so as to reasonably prevent any Infiltration or Inflow which would result in extraordinary levels of groundwater or storm water into PEMBROKE PARK's System, and thereby into the HOLLYWOOD System.

b. PEMBROKE PARK agrees to adopt, enact and enforce such rules, regulations or ordinances as may be required from time to time to ensure that PEMBROKE PARK, or users of PEMBROKE PARK's system are not discharging or causing to be discharged waters or waste which would cause PEMBROKE PARK's wastewater to

be unacceptable under the provisions of Article III of this Agreement.

c. PEMBROKE PARK agrees to be responsible for prompt implementation in its system of all actions required by any federal, state or local regulations imposed on HOLLYWOOD or the HOLLYWOOD System, or PEMBROKE PARK, either now or in the future with regard to the collection, treatment, transportation and disposal of wastewater, including, but not limited to, EPA general pretreatment requirements as contained in 40 CFR 403, and as same may be amended from time to time.

4. Service Area. PEMBROKE PARK agrees that it shall not accept wastewater from outside its Service Area for transmission to the HOLLYWOOD System unless PEMBROKE PARK receives approval from HOLLYWOOD and any regulatory agencies that have jurisdiction over the matter for said connection prior to its being made, with such approval being the subject of a written supplement or agreement which shall be attached hereto and made a part hereof. The parties hereto acknowledge that all contractual obligations regarding connection to and transmission to the HOLLYWOOD System existing as of the date of this Agreement, have been disclosed by each party to the other. Any agreement(s) between Large Users to exchange, trade, sell, assign or otherwise agree with respect to the use of each others flows within their respective Service Areas must be approved, in writing, by HOLLYWOOD. Unless otherwise expressly agreed to in writing, HOLLYWOOD has no obligation to accept or provide service for any wastewater which originates outside of PEMBROKE PARK's Service

Area. Subject to Article II, Section 6.B. hereof, PEMBROKE PARK agrees that it shall cause all wastewater flow generated within its present Service Area as defined in Exhibit "B", to be transmitted to the HOLLYWOOD System.

5. Future Flow Projections. PEMBROKE PARK agrees that it shall annually review its needs for wastewater transmission, treatment and disposal service, and shall, with advice and counsel of a professional engineer project its future ADF needs to the best of its knowledge and ability, for both the next ensuing Fiscal Year and the tenth year projection to HOLLYWOOD, by written notice, on or before March 1st of each year. Said projections shall be in such a format as may be requested by HOLLYWOOD from time to time and shall provide the following information:

(1) Average Daily Flow (MGD) for the next ensuing Fiscal Year; and

(2) Average Daily Flow (MGD) anticipated during the three months of greatest flow.

6.A. HOLLYWOOD's Obligation to Provide Wastewater Treatment Services. HOLLYWOOD acknowledges and agrees that in accordance with the terms and conditions of this Agreement and the other Large User Agreements, it has an affirmative, continuing obligation to provide wastewater treatment services to PEMBROKE PARK and the other Large Users with respect to wastewater flows within the Hollywood Service Area as shown on Exhibit A. HOLLYWOOD's obligation to provide wastewater services to PEMBROKE PARK shall continue until such time as this Agreement

is terminated in accordance with Article VI hereof, or until such time, if any, as HOLLYWOOD is ordered to stop treating PEMBROKE PARK's flows by injunction or final order of a court of competent jurisdiction or by a regulatory agency with the jurisdiction to issue such an order or injunction.

6.B. Projected Flows (ADF). PEMBROKE PARK acknowledges that HOLLYWOOD will rely on PEMBROKE PARK's future flow projections for ADF for the Fiscal Year 1999-2000, as set forth herein, in calculating and planning for the initial HOLLYWOOD System capacity expansion and the financing for same, and that any material increase or decrease in the amount of actual ADF from that disclosed or projected could seriously impact on HOLLYWOOD and the other Large Users with regard to their obligations concerning plant expansion and financing of same. Accordingly, except for those "Excess Flows" as defined herein, which PEMBROKE PARK elects to flow to an alternate system, PEMBROKE PARK agrees that it shall cause all wastewater collected within its Service Area as defined in Exhibit "B" hereto to be transmitted to the HOLLYWOOD System throughout the term of this Agreement. In addition, PEMBROKE PARK agrees that it shall not cause any wastewater collected within its Service Area, as defined in Exhibit "B" hereto, to be transmitted to the HOLLYWOOD System in excess of its projected flows set forth herein for the Fiscal Year 1999-2000 throughout the term of this Agreement, unless PEMBROKE PARK acquires or leases additional flow capacity from another Large User as set forth in Article II, Section 4, herein or unless HOLLYWOOD makes a further plant

capacity expansion to accommodate PEMBROKE PARK's additional flow needs. Debt Service Charges relating to any additional plant capacity expansions shall be borne by those Large Users who require said expansions in proportion to their respective needs.

PEMBROKE PARK hereby makes the following ADF Flow projections for the Fiscal Years indicated.

FISCAL YEAR 10/1-9/30	ADF (RESERVE CAPACITY MGD)
1988-1989	0.69
1999-2000*	1.00

* Fiscal Year 1999-2000 projections to be used by HOLLYWOOD for purposes of planning HOLLYWOOD System capacity expansion to the year 2000.

HOLLYWOOD shall have the right and power to enforce the limitation of its obligations hereunder either by suit or other proceedings at law or in equity and to take such action as necessary to prohibit PEMBROKE PARK from transmitting wastewater into HOLLYWOOD's Transmission and Treatment Facilities which exceeds 110% of the amount of PEMBROKE PARK's Annual Average Daily Flow as projected for a given Fiscal Year. Subject to obtaining HOLLYWOOD's and any regulatory agency's prior written consents, which consent from HOLLYWOOD shall not be unreasonably withheld, PEMBROKE PARK may transmit only those flows from within its Service Area which exceeds the ADF projected for Fiscal Year 1999-2000 (the "Excess Flows") as set forth above to available alternate systems for wastewater treatment. HOLLYWOOD shall have

no obligations or liabilities with respect to any Excess Flows which PEMBROKE PARK elects to transmit to any alternate system.

7. Meters. To the extent that HOLLYWOOD has not already done so, HOLLYWOOD shall furnish and install wastewater metering, recording and transmitting devices to be located at the sites as set forth in Exhibit "C". HOLLYWOOD shall retain ownership of the metering, recording and transmitting devices, together with any appurtenances thereto. PEMBROKE PARK shall reimburse HOLLYWOOD for the design, construction, calibration, and financing costs of such devices, to the extent that PEMBROKE PARK has not already done so, within thirty (30) days of receiving the invoice for said costs. The type of equipment selected shall be at the discretion of HOLLYWOOD; however, HOLLYWOOD shall require the manufacturer of the equipment to submit certified calibration tests to PEMBROKE PARK and HOLLYWOOD.

8. Meter Maintenance. HOLLYWOOD shall have a semi-annual inspection report prepared regarding the condition and accuracy of the metering device by a representative of the meter manufacturer. The expense for the annual inspection shall be an operating charge of the HOLLYWOOD facilities. A copy of this semi-annual report shall be furnished to PEMBROKE PARK.

9. Meter Accuracy. The parties hereto agree that should the metering equipment installed by HOLLYWOOD be found to be inaccurate beyond the manufacturer's range of accuracy, the meter will be assumed to be inaccurate since the last meter check or for a period of three (3) months, which ever time is less, and

the following month's billing will be adjusted to show a credit or additional charge to PEMBROKE PARK for metered flow for that period. If PEMBROKE PARK, for whatever reason, requests a meter report in addition to the semiannual reports, HOLLYWOOD will comply. If the meter was malfunctioning or required calibration, the expense associated with PEMBROKE PARK's request will be an operating expense to the HOLLYWOOD System. If the meter report indicates the meter was operating properly within the manufacturer's guaranteed range of accuracy, PEMBROKE PARK will be charged in the subsequent monthly bill for the expenses associated with the inspection.

10. Meter Failure. The parties agree that if at any time during this Agreement a metering device shall in any way fail to tabulate the flow into the HOLLYWOOD collection and treatment facilities, each successive monthly charge shall be based on the last available meter reading and adjusted to equal the same percent of total plant flow each month until the meter is once again fully operational.

11. Registration of Meter. Registration of a meter, when maintained as above, shall be binding on both parties for all wastewater flow charges. Access to the meters shall be available to PEMBROKE PARK upon request and in the presence of a representative of HOLLYWOOD.

12. Meter Reading. Meter reading for billing purposes shall occur as nearly as possible on the 25th day of each month.

ARTICLE III. LIMITATION ON DISCHARGE OF CERTAIN WASTES

1. Type of Waste to be Discharged.

a. Except as hereinafter provided, PEMBROKE PARK shall not discharge nor cause to be discharged any of the waters or wastes described in paragraph b. below, into the HOLLYWOOD System. All of the quality limitations enumerated below apply to concentrations or other physical characteristics obtained from analysis by HOLLYWOOD of representative samples of the waste collected, which samples upon request of PEMBROKE PARK in writing will be divided between HOLLYWOOD and PEMBROKE PARK. Such analysis as set forth herein shall be made in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater" prepared and published jointly by the American Public Health Association, the American Waterworks Association and the Water Pollution Control Federation for so long as same is continued to be published. In the event these standards are no longer published, the parties shall agree on the standard for such analysis.

b. No person shall discharge or cause to be discharged any of the following described waters or wastes into the HOLLYWOOD System.

(1) Any inflow and that infiltration which can be deemed cost effective to correct.

(2) Any wastewater or vapor having a temperature higher than one hundred fifty (150°) degrees Fahrenheit ($65^{o}C$).

(3) Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, solid or gas.

(4) Any waters or wastes having a pH lower than 5.5 or higher than 9.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel of HOLLYWOOD.

(5) Any wastewater containing constituents in concentrations which are in excess of the concentrations set forth for normal wastewater:

BOD5	400 ppm
TSS	400 ppm
TKN	30 ppm
Phosphorus (P)	15 ppm
COD	800 ppm
TDS	2000 ppm

(6) Any waters containing toxic or poisonous solids, liquids or gases in sufficient quantities, which either singly or by interaction with other wastes, may injure or interfere with any waste treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the wastewater treatment plant, as sampled at or in the immediate vicinity of the point of discharge to the HOLLYWOOD System. The maximum limits for the below listed substances are:

Antimony	0.200 ppm
Arsenic	0.100 ppm
Barium	5.000 ppm
Beryllium	0.010 ppm
Bismuth	0.045 ppm
Boron	1.000 ppm
Cadmium	0.500 ppm
Chlorides	600.000 ppm
Chromium, Hexavalent	0.500 ppm
Chromium, Total	1.000 ppm
Cobalt	1.000 ppm
Copper, (Total)	2.000 ppm
Cyanides	0.250 ppm
Hydrogen Sulfide	3.000 ppm
Iron	10.000 ppm
Lead	0.400 ppm
Manganese	1.000 ppm

Mercury	0.100 ppm
Molybdenum	0.500 ppm
Nickel	1.800 ppm
Phenols	0.005 ppm
Selenium	0.100 ppm
Silver	0.240 ppm
Strontium	0.200 ppm
Tellurium	0.001 ppm
Tin	0.800 ppm
Toxic Radioactive Isotopes without a special permit	0.000 ppm
Zinc, (Total)	1.000 ppm
Pesticides	0.010 ppm
Herbicides	0.010 ppm
Fungicides	0.010 ppm

The maximum allowable values of the substances listed above may from time to time be revised by federal, state, local regulatory agencies, or HOLLYWOOD, if determined by the Consulting Engineer to be in the best interest of the Hollywood System, in which case PEMBROKE PARK agrees not to exceed such revised maximum limits. HOLLYWOOD shall provide PEMBROKE PARK, written notice, of any amendment or change to said schedule.

(7) Any solid or viscous substance in quantities or of such size capable of causing obstruction to the flow in the sewers or an interference with the proper operation of the wastewater facilities, such as, but not limited to, ashes, cans, sand, straw, shavings, metal, glass, tar, wax, lime slurry, lime residues, chemical residues and paint residues.

(8) Any wastewater containing more than twenty-five (25) milligrams per liter of petroleum oil, non-biodegradable cutting oils, or products of mineral oil origin.

(9) Any water or waste containing more than one hundred (100) milligrams per liter of biodegradable oils, fat,

grease or any oily substances, whether singularly or in a combination.

(10) Any water or wastes containing suspended solids or color or other such characteristics in quantity that unusual attention or expense is required to handle such material at the HOLLYWOOD facility, without a special permit.

(11) Any noxious or malodorous gas or substance which either singularly or by interaction with other wastes, is capable of creating a public nuisance or hazard to life, or which prevents or makes unduly hazardous the entry into sewers for maintenance and repair.

(12) Any water or wastes containing substances which are not amenable to treatment or reduction by the wastewater treatment processes employed, or are amenable to treatment only to such degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

(13) Any waters or wastes which constitute a hazard to any structure or appurtenances of the HOLLYWOOD System.

(14) Any water or waste which singularly or in combination with other waters or wastes that inhibit or interfere with the treatment process or may render the treatment plant effluent toxic as determined by regulatory permit requirements.

(15) Any waters or wastes that render the sludge produced by the treatment plant to be other than a Class-I sludge as defined by Florida's Department of Environmental Regulation.

(16) Any substance or constituent in violation of "Federal (National) Categorical Pretreatment Standards" as issued by the United States Environmental Protection Agency, including any amendments or successor enactments thereto, or which exceeds, or would exceed, federal, state or local quality requirement, unless the discharge is allowable by a duly issued operating permit from the Broward County Environmental Quality Control Board.

2. Compliance.

(a) If at any time PEMBROKE PARK shall not comply with the restrictions imposed upon it in the preceding portion of this Article, or if PEMBROKE PARK shall create any condition which HOLLYWOOD should determine destructive to any part of HOLLYWOOD's System, HOLLYWOOD shall give thirty (30) days written notice to PEMBROKE PARK to discontinue such operation or practice, within which period PEMBROKE PARK agrees to comply. If PEMBROKE PARK does not initiate and/or establish a compliance program within ninety (90) days of notification, and/or if any damages result from the discharge of improper wastes by PEMBROKE PARK, HOLLYWOOD reserves the right to provide such preliminary treatment facilities or establish such programs as required to bring PEMBROKE PARK's discharge into compliance. PEMBROKE PARK will be responsible to HOLLYWOOD for all charges, both capital and operational for the establishment of these programs or facilities as described herein. Additionally, failure to comply with the conditions stipulated in Section 1 hereof, shall place PEMBROKE PARK in default of this Agreement.

(b) PEMBROKE PARK recognizes and agrees that HOLLYWOOD has the obligation and authority to perform the below as well as any future activities required by Environmental Protection Agency General Pretreatment Regulations, 40 CFR 403, Section 403.8, as set forth below: HOLLYWOOD agrees to notify PEMBROKE PARK, in writing, and will give PEMBROKE PARK the opportunity to take the appropriate action, prior to HOLLYWOOD taking any of the following actions.

(1) deny or condition new or increased contributions or pollutants, or changes in the nature of pollutants, to the HOLLYWOOD System by industrial user;

(2) require compliance with applicable pretreatment standards and requirements by industrial users;

(3) control, through permit, contract, order, or similar means, the contribution to the HOLLYWOOD System by each industrial user to ensure compliance with applicable pretreatment standards and requirements;

(4) require (a) the development of a compliance schedule by each industrial user for the installation of technology required to meet applicable pretreatment standards and requirements and (b) the submission of all notices and self-monitoring reports from industrial users as are necessary to assess and assure compliance by industrial users with pretreatment standards and requirements, including, but not limited to, the reports required in Paragraph 403.12;

(5) carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of

information supplied by industrial users, compliance or non-compliance with applicable pretreatment standards and requirements by industrial users;

(6) obtain remedies for non-compliance by an industrial user with any pretreatment standard and requirement.

(c) The parties mutually agree that no statement contained herein shall be construed as preventing any special agreement or arrangement between HOLLYWOOD and PEMBROKE PARK or any user within PEMBROKE PARK's Service Area, whereby an industrial waste of unusual strength or charter may be accepted by HOLLYWOOD for treatment, subject to additional payment by PEMBROKE PARK, or said user.

(d) HOLLYWOOD agrees to provide PEMBROKE PARK with written notification of changes to the Regulations and a copy of the EPA required Pretreatment Annual Report.

(e) Nothing contained herein shall obligate PEMBROKE PARK to pay any costs incurred by HOLLYWOOD for pretreatment facilities required as a direct result of discharge of improper wastes into the HOLLYWOOD System by other Large Users.

3. Sampling.

a. PEMBROKE PARK agrees to include in the design of its wastewater delivery system a sampling station so that HOLLYWOOD can take representative samples of the wastewater as a means of monitoring the characteristics of the wastewater received from PEMBROKE PARK, and PEMBROKE PARK shall further provide to HOLLYWOOD such right-of-way or easements as may be

necessary to assure HOLLYWOOD of access to the sampling station site. HOLLYWOOD shall, upon notification to PEMBROKE PARK, have the right at any time to collect samples of sewage and industrial wastes at selected locations within PEMBROKE PARK's facilities for the purpose of making laboratory analysis of these wastes. The cost of collecting and then testing such samples shall be considered a HOLLYWOOD facility treatment and effluent disposal operating expense.

b. PEMBROKE PARK shall, upon written request, submit annually to HOLLYWOOD, no later than April 1 of each year, a laboratory analysis conducted by a State certified laboratory of composite samples of the combined Industrial and Domestic Wastes leaving PEMBROKE PARK's facilities at each point of connection. The costs for said submission shall be borne by PEMBROKE PARK. PEMBROKE PARK shall give HOLLYWOOD five (5) days written notice exclusive of Saturday, Sunday and holidays, of its intent to take the required samples, in order that HOLLYWOOD may be present at the time the sample is taken. The analysis made pursuant to this paragraph shall be made on twenty-four (24) hour representative samples and may include temperature, pH, and those substances listed in paragraph 1b(3), (5), (6), (8) and (9) above. HOLLYWOOD shall direct PEMBROKE PARK as to the particular samples, including pesticides, herbicides and/or fungicides for which analysis is required.

4. Regulatory Action.

a. PEMBROKE PARK agrees to adopt, enact and enforce such necessary rules, regulations and/or ordinances as

may be required so as to ensure that the users of PEMBROKE PARK's system do not discharge or cause to be discharged waters or wastes which would cause PEMBROKE PARK's wastewater to be unacceptable under the provisions of this Article, and to furnish to HOLLYWOOD certified copies of said regulations, rules and/or ordinances within one hundred eighty (180) days from the date of enactment of same or one hundred eighty (180) days from the date of this Agreement, whichever shall first occur.

b. PEMBROKE PARK shall be responsible for implementation in its system of federal, state or local regulations imposed on HOLLYWOOD or PEMBROKE PARK, either now or in the future.

5. Additional Charge for Wastes of Unusual Strength. In lieu of the remedies set forth in paragraph 2 of the Article above, in the event of a violation or default by PEMBROKE PARK pursuant to this Article, PEMBROKE PARK shall be subject to an additional charge which shall, upon imposition, be included in PEMBROKE PARK's monthly billing(s) subsequent to said determination by HOLLYWOOD. Designation of waste as being of unusual strength or character shall occur when the contributed wastewater parameters exceed those set forth in paragraph 1 of this Article. The additional charge shall be based upon HOLLYWOOD's total cost incurred in providing treatment, additional treatment programs, or additional facilities for the treatment of such wastes of unusual strengths. Any monies received from this Section shall be applied by HOLLYWOOD first to pay for the cost of correcting the problem caused by PEMBROKE

PARK and then to reduce the relevant operating expense of the HOLLYWOOD System.

6. Emergency Action. Notwithstanding anything to the contrary contained above, if at any time during the term of this Agreement, HOLLYWOOD determines, in its sole and absolute discretion, that PEMBROKE PARK's failure to comply with the restrictions imposed upon it by this Agreement constitutes such an immediate threat to the HOLLYWOOD System and/or the public health or safety so as to constitute an emergency situation requiring immediate remedial action, then, in that event, HOLLYWOOD may declare an emergency situation to exist and upon written notice to PEMBROKE PARK, may proceed to take whatever corrective action it deems necessary as to said emergency to prevent further nuisance or damage to HOLLYWOOD's System without the necessity of giving notice (other than notice of the emergency situation) to PEMBROKE PARK or affording PEMBROKE PARK an opportunity to remedy the situation. Any costs incurred by HOLLYWOOD in response to an emergency situation shall be charged to PEMBROKE PARK, and shall be the sole responsibility of PEMBROKE PARK to pay.

ARTICLE IV. CHARGES AND BILLING

1. Annual Estimate. HOLLYWOOD shall estimate all costs (on a Fiscal Year basis) of providing wastewater transmission, treatment, and disposal services to PEMBROKE PARK beginning with Fiscal Year 88-89. This annual estimate shall be the basis for PEMBROKE PARK's monthly billings during the next succeeding Fiscal Year. Adjustments will be made annually as described below based upon actual flows and actual costs when known.

2. Billings Procedure. The parties hereto agree that HOLLYWOOD shall provide wastewater transmission, treatment and disposal services to PEMBROKE PARK, at rates and charges constituting the full and actual costs of such service, including but not limited to Operation, Maintenance and Administrative costs, Renewal, Replacement and Improvement Account Contributions, Debt Service Charges, Depreciation Charges, and compensatory charges, and HOLLYWOOD shall set the same proportionate rates and charges for all Large Users of the HOLLYWOOD System. PEMBROKE PARK shall pay a monthly charge to HOLLYWOOD, as calculated pursuant to Section IV-1. above, for wastewater transmission, treatment and disposal services provided by HOLLYWOOD, commencing on the date of execution of this Agreement. Such charges shall be paid to HOLLYWOOD by PEMBROKE PARK monthly, and shall include the following components:

a. Operation, Maintenance and Administrative Costs. Operation, Maintenance and Administrative Costs are defined in Article I, paragraph 19 hereof, and will be estimated

for each Fiscal Year. The portion of the monthly charge to PEMBROKE PARK for Operation, Maintenance and Administrative Costs shall be based on the estimated rate per thousand gallons and shall be applied on actual flow used by PEMBROKE PARK during the billing period.

(1) Adjustment to Operation, Maintenance and Administrative Costs. At the end of each Fiscal Year, an annual adjustment shall be computed to determine PEMBROKE PARK's share of the actual Operation, Maintenance and Administrative Costs. This computation will be based upon the actual operation, maintenance and administrative expenses recorded for the HOLLYWOOD System for that Fiscal Year, multiplied by PEMBROKE PARK's percentage of the actual number of gallons of wastewater treated and disposed of through the HOLLYWOOD System for that Fiscal Year. Each adjustment in the operation, maintenance and administrative monthly charges shall be made subsequent to, and subject to final verification of the operation, maintenance and administrative expenses incurred which verification shall be included in the annual review of said charges. The above-referenced annual review shall be performed by an independent Financial Consultant selected by HOLLYWOOD and shall be distributed to PEMBROKE PARK on or before March 31 of the year following the end of each Fiscal Year. In the event the annual adjustment reflects that an underpayment has been made by PEMBROKE PARK with regard to Operation, Maintenance and Administrative Costs, then the amount due and owing for said underpayment shall be shown as a separate line item on the next

monthly bill sent to PEMBROKE PARK after the adjustment has been made. In the event the annual adjustment reflects that an overpayment has been made by PEMBROKE PARK, with regard to Operation, Maintenance and Administrative Costs, then in that event the amount of said overpayment shall be credited to PEMBROKE PARK as a separate line item on the next monthly bill after the adjustment has been made.

b. Debt Service Charges. Debt Service Charges, as defined in Article I, paragraph 3, for the HOLLYWOOD System shall be computed annually as follows: (i) with respect to projects relating to improvement and upgrading of the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by taking the ratio of the amount of PEMBROKE PARK's actual flow to the total flow of the HOLLYWOOD System for each Fiscal Year, multiplied annually by the total debt service due in that Fiscal Year for such upgrading project(s); (ii) with respect to projects relating to the initial plant capacity expansion of the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by taking the difference between PEMBROKE PARK's actual ADF Flows for Fiscal Year 1988-89 and PEMBROKE PARK's projected ADF Flow for the Fiscal Year 1999-2000 and then dividing that difference by the projected increase in capacity in the HOLLYWOOD System over and above the total System capacity for the Fiscal Year 1988-1989 as a result of such planned capacity expansion; and then multiplying that fraction by the total debt service due in that Fiscal Year for such expansion project(s); provided however, PEMBROKE PARK's Debt Service Charges with

respect to this initial capacity expansion financing will be adjusted pursuant to Article II, Section 6.B. in the event that PEMBROKE PARK's actual flows exceed its projected flows for Fiscal Year 1999-2000; and (iii) with respect to projects relating to transmission pipes and related transmission facilities within the HOLLYWOOD System, PEMBROKE PARK's Debt Service Charges shall be computed annually by multiplying the proportional cost, based on design, of the new transmission facilities which are required by PEMBROKE PARK by the total debt service due in that Fiscal Year for such transmission project. In addition, except as otherwise set forth in Exhibit "D" hereto, any Debt Service Charges which may be due HOLLYWOOD from PEMBROKE PARK by reason of any financings relating to the HOLLYWOOD System under the Prior Agreement (other than financings for transmission) shall be recalculated in accordance with the applicable formulae set forth above. The above described formulae are illustrated in Exhibit "D" attached hereto. In determining which projects are related to upgrading or expansion of the Hollywood System, prudent engineering judgment shall be used. The Debt Service Charges relating to any additional plant capacity expansions of the HOLLYWOOD System shall be borne by the Large Users who require said expansion in proportion to their respective needs.

c. Depreciation Charges. Depreciation Charges as defined in Article I, paragraph 4 above, shall be computed based on PEMBROKE PARK's proportionate share (as established in the Prior Agreement) of the three (3%) percent per year depreciation

on the existing facilities constructed from revenues of HOLLYWOOD other than the HOLLYWOOD Sewer System Bond proceeds and federal grants; the cost of said facilities being One Million Ninety-Six Thousand Eight Hundred Sixty and 74/100 ($1,096,860.74) Dollars.

d. Renewal, Replacement and Improvement Account Contribution.

(1) Funds from the Renewal, Replacement and Improvement Account, shall be used for the improvement, repair and replacement of the HOLLYWOOD System. Said Account shall be funded through contributions made monthly by PEMBROKE PARK to said account. As of October 1, 1988, the balance in PEMBROKE PARK's Account is deemed to be zero, and all other amounts on deposit in said account shall be carried forward. HOLLYWOOD shall maintain a separate Renewal, Replacement and Improvement Account for each Large User. Any amounts collected by HOLLYWOOD for PEMBROKE PARK's Account shall be utilized by HOLLYWOOD only for renewals, replacements and improvements to the HOLLYWOOD System. HOLLYWOOD shall use prudent engineering judgment in determining the need for renewal, replacement and improvement projects. Expenditure of funds on deposit in each Large User's RR&I Account shall be made based on their respective percentage of the total System flows. The contributions made by PEMBROKE PARK to the Account shall be in addition to all other charges collected by HOLLYWOOD set forth herein. Except as otherwise provided herein, PEMBROKE PARK's monthly contribution to this Account shall be ten percent (10%) of PEMBROKE PARK's monthly total bill for wastewater transmission and treatment, including,

but not limited to, Debt Service Charges, Depreciation Charges, and Operation, Maintenance and Administrative Costs. Payments to said Account shall continue to be made monthly at the aforestated rate until such time as PEMBROKE PARK's Account contains funds equal to PEMBROKE PARK's share of a maximum amount of five (5%) percent of the actual cost of the HOLLYWOOD System, and as said System may be expanded from time to time. During any period in which PEMBROKE PARK's Account is maintained at a level equaling its pro rata share of five percent (5%) of the actual cost of the HOLLYWOOD System, as expanded, no monthly payments shall be due from PEMBROKE PARK to this Account; provided, however, that pursuant to this Article, the maximum level may be modified from time to time, in which event PEMBROKE PARK shall resume making monthly payments to this Account until its required contribution level is reached. In the event the balance in PEMBROKE PARK's Account shall at any time fall below the maximum prescribed level set forth herein, then at that time PEMBROKE PARK shall resume making monthly payments in accordance with this paragraph so as to bring the balance in said Account to the maximum prescribed level. Said Account shall include any unexpended monies deposited since October 1, 1988, remaining on deposit in the special renewal or replacement and improvement fund established under the Prior Agreement between the parties. Contributions to the Renewal, Replacement and Improvement Account shall earn interest at HOLLYWOOD's pooled fund interest rate, which interest shall be credited annually based on the average monthly balance in PEMBROKE PARK's Account.

(2) In the event it is necessary to renew, replace or improve an element of the HOLLYWOOD System for which sufficient funds are not available in the Renewal, Replacement and Improvement Account established for PEMBROKE PARK, HOLLYWOOD shall notify PEMBROKE PARK of the deficiency in said Account. PEMBROKE PARK shall have a period of sixty (60) days from the date of said notification to contribute any said deficiency to the Renewal, Replacement and Improvement Account. In the event PEMBROKE PARK has not made said deficiency contribution within sixty (60) days of the date of notification of the deficiency by HOLLYWOOD, HOLLYWOOD, at its option may: (i) obtain financing necessary to fund the deficiency, in which event PEMBROKE PARK shall pay the cost of said financing as additional Debt Service Charges; or (ii) HOLLYWOOD may fund the deficiency internally, in which event PEMBROKE PARK shall repay HOLLYWOOD the amount of the deficiency, plus interest at HOLLYWOOD's earned interest rate as an additional monthly charge to PEMBROKE PARK, over a period of not less than sixty (60) months and not greater than one hundred twenty (120) months.

3. Additional Capacity. At such time as financing is secured for construction of additional facilities as contemplated in Article V below, so as to service the various Large Users, or it becomes necessary for PEMBROKE PARK to secure additional transmission or treatment capacity, PEMBROKE PARK shall pay all additional Debt Service Charges based on the formulae set forth in Article IV, 2(b) hereof.

4. Payment and Penalties for Nonpayment. The parties agree that HOLLYWOOD shall bill PEMBROKE PARK for providing the services necessary for wastewater treatment, transmission and disposal, on a monthly basis in accordance with HOLLYWOOD's standard billing procedures. PEMBROKE PARK shall pay such billings within forty-five (45) days of the receipt of the monthly bill. Should a billing or a portion of the billing be outstanding for a period of more than forty-five (45) days from the date of receipt of the original billing, then PEMBROKE PARK shall be considered in default of this Agreement. Should PEMBROKE PARK not pay within the forty-five (45) day period set forth herein, PEMBROKE PARK shall pay interest on the unpaid balance at the rate of twelve percent (12%) per annum.

5. Dispute Over Amounts Billed. PEMBROKE PARK agrees that in the event of a dispute as to a billing invoice or the amount PEMBROKE PARK owes on a monthly bill, and which dispute the parties cannot resolve within forty-five (45) days from the date of receipt of the original invoice, then PEMBROKE PARK shall automatically deliver to HOLLYWOOD the total amount billed and an adjustment of the billing invoice amount, if any, shall be made subject to subsequent agreement or adjudication. The amount of such charge that is in dispute shall be held in escrow by HOLLYWOOD until the dispute is resolved, provided however, that in the event the disputed amount relates to Debt Service Charges, then HOLLYWOOD shall be entitled to apply such disputed amount to make debt service payments when due.

6. Access to Records. HOLLYWOOD agrees that it shall maintain accurate accounting records for the wastewater collection, treatment and disposal facilities, and that HOLLYWOOD will make available to PEMBROKE PARK for inspection or review said records upon reasonable advance notice (at least fifteen 15 days) and specific written request as to the records requested. Any questions or explanations necessary as to the information contained in such records shall be addressed at the Large Users' Advisory Committee meetings.

ARTICLE V. ADDITIONAL OBLIGATIONS OF THE PARTIES

1. Expansion of the Hollywood Regional Wastewater Treatment Facilities. HOLLYWOOD and PEMBROKE PARK acknowledge that the present rated capacity of the HOLLYWOOD Regional Wastewater Treatment Facilities is 38 MGD, and that subsequent to the execution of this Agreement and similar agreements between HOLLYWOOD and the other Large Users, that the HOLLYWOOD System is planned to be initially expanded to treat the total projected flow requirements for the year 1999-2000 of all Large Users, including HOLLYWOOD. In the event that any further plant expansion(s) become necessary, then the costs, including the Debt Service Charges, relating to such additional expansion(s) shall be borne by those Large Users who require said expansion(s) in proportion to their respective needs. In the event that the HOLLYWOOD System is rerated without any capital expenditure to an MGD in excess of its then current capacity by an agency with regulatory authority to rerate the capacity of the plant, then each of the Large Users, including HOLLYWOOD, shall be given credit for such increased capacity on a pro rata basis in proportion to their maximum projected reserved flows set forth in Article II, Section 6.B. hereof as adjusted or amended, as a percentage of total projected reserved flows for all Large Users into the HOLLYWOOD System at the time of rerating.

2. Cost of Expansion of the Hollywood Regional Wastewater Treatment Facilities. At such time as HOLLYWOOD, determines it is necessary, in order to respond to the needs of the Large Users utilizing the HOLLYWOOD System, to expand the

HOLLYWOOD System, HOLLYWOOD shall charge PEMBROKE PARK monthly one-twelfth (1/12) of PEMBROKE PARK's annual Debt Service Charges then due attributable to said expansion which shall be computed in accordance with the formulae set forth in Article IV, 2(b) hereof. Said Debt Service Charges will be imposed at the time that HOLLYWOOD incurs the debt.

Nothing contained herein shall obligate HOLLYWOOD to undertake financing, either by issuing wastewater system revenue bonds, or any other financial mechanism, without the cooperation of PEMBROKE PARK, and the other Large Users and PEMBROKE PARK agrees to cooperate and execute any reasonably necessary document that may be required by the credit enhancement provider, bond insurer or rating agencies in order for HOLLYWOOD to obtain the financing for the expansion contemplated herein, including, documents, representations and consents, if any, required by bond rating agencies and municipal bond insurers or credit enhancement providers in connection with obtaining a credit rating or bond insurance on the bonded obligations; provided however, that PEMBROKE PARK shall not be required to execute any document or note that creates a bonded indebtedness directly to PEMBROKE PARK.

3. PEMBROKE PARK's Obligation to Deliver Wastewater. Except as otherwise provided in Article II hereof, PEMBROKE PARK agrees that during the term of this Agreement, it shall deliver all existing, and future wastewater flows collected by it, from within its Service Area as set forth in Exhibit "B", to the HOLLYWOOD System, and HOLLYWOOD agrees to accept such wastewater

flows from PEMBROKE PARK's Service Area on the terms and conditions set forth herein.

4. PEMBROKE PARK's Cooperation. PEMBROKE PARK agrees to cooperate and execute any necessary documents to effect the agreements contained herein, and to cooperate with HOLLYWOOD under the terms of the Florida Intergovernmental Cooperation Act as may be required from time to time in furtherance of this Agreement, and PEMBROKE PARK further agrees that it shall take no action which would jeopardize the tax exempt status, pursuant to the Internal Revenue Code, as amended from time to time, of the interest on any debt now or hereafter issued to finance the HOLLYWOOD System.

5. Changes Required by Outside Agencies. Notwithstanding HOLLYWOOD's obligations with respect to treating and disposing PEMBROKE PARK's flows as provided herein, HOLLYWOOD may revise the schedule of flows set forth herein in the event any federal, state or local agency having jurisdiction promulgates rules and regulations that would affect the amount or quality of flow HOLLYWOOD can treat or dispose. In that event, the parties agree to comply with any such rule or regulation and make such amendments to this Agreement as may be necessary, provided, however, that should there be a determination by either party that the rules or regulations so promulgated are unreasonable or not binding, the parties hereto reserve the right to challenge said regulations. HOLLYWOOD and PEMBROKE PARK acknowledge that certain federal, state and local agencies have jurisdiction or control over pollution matters and, should such

agency issue legal and enforceable orders or rules that may alter any of the terms and conditions of this Agreement, there shall be no liability on either party by reason of such action, provided that HOLLYWOOD shall not be precluded from making any necessary adjustments to the sewage collection and treatment rates; provided further, that any increased costs incurred by HOLLYWOOD from any such action shall be assessed pro rata to PEMBROKE PARK based on PEMBROKE PARK's actual flows; unless said adjustments are occasioned solely by the acts of Large Users other than PEMBROKE PARK, in which case PEMBROKE PARK shall not be liable for said adjustments.

6. Adequate Rate Schedule. PEMBROKE PARK agrees that it shall establish and maintain rates and service charges or other means of obtaining funds within its Service Area which shall be sufficient to provide the monthly payments to HOLLYWOOD for the wastewater collection and treatment service contemplated herein, and such rates and charges shall be revised as may be required from time to time to provide sufficient funds to pay any sums due HOLLYWOOD under the terms of this Agreement.

ARTICLE VI. PROVISIONS RELATING TO TERMINATION OF AGREEMENT AND ASSIGNMENT OF HOLLYWOOD'S RIGHTS AND OBLIGATIONS

1. Termination Clause. Except as otherwise provided in Section 2 of this Article VI, this Contract may be terminated at any time by either participating party on one (1) years notice (or such shorter time as the parties shall mutually agree) to the other in writing by certified mail, only under the following conditions:

a. Termination by PEMBROKE PARK.

(1) Subject to subsection (3) below, PEMBROKE PARK shall pay to HOLLYWOOD in advance of termination all Debt Service Charges which would otherwise have been chargeable to PEMBROKE PARK under the terms of this Agreement (based upon a weighted average for future years using projected flows). If such Debt Service Charges can be reduced by calling bonds for redemption or otherwise providing for their payment prior to maturity under the terms of their issuance and if PEMBROKE PARK provides HOLLYWOOD with sufficient money to cover its Debt Service Charges and all expenses in connection with such call for redemption, including premiums, legal fees and costs, publication costs, and trustees and paying agents fees and mailing costs, then HOLLYWOOD shall call for redemption as many of such bonds as may be called under their terms with the money paid by PEMBROKE PARK to HOLLYWOOD. HOLLYWOOD reserves the right to determine which bonds to call.

(2) Subject to subsection (3) below, PEMBROKE PARK shall, in addition to Debt Service Charges, pay to HOLLYWOOD a sum equal to the then present value of all other

payments which, in the absence of such termination, would be made by PEMBROKE PARK to HOLLYWOOD hereunder during the period when HOLLYWOOD would receive and treat wastewater from PEMBROKE PARK, through and including five (5) years from the date of termination using PEMBROKE PARK's annual payment in the year of termination. The "then present value" as used above means the value on the termination date of the various sums payable thereafter, discounted at the then prevailing Prime interest rate plus all payments due and past due with interest at the then prevailing Prime interest rate from the date due to the termination date. In making such determination, PEMBROKE PARK shall be given full credit for all actual reductions, if any, in HOLLYWOOD's expenses of operation and maintenance, and administration which reductions are attributable to the termination of this Agreement. Hollywood shall also have an affirmative obligation to take such actions as are available in order to mitigate its expenses.

(3) There shall be deducted from the sums of the amounts payable by PEMBROKE PARK under subparagraphs (1) and (2) above any amount of liability (not in excess of said sum) assumed in writing by any other municipality, political subdivision or other entity, simultaneous with or prior to such termination if (a) capability of municipality, the political subdivision or other entity assuming such liability to satisfy the same shall be found satisfactory by HOLLYWOOD, (b) such municipality, political subdivision or other entity shall execute an agreement with HOLLYWOOD substantially the same as this Agreement, (c) whenever any revenue bonds of the CITY OF HOLLYWOOD payable in whole or in

part from sewer revenues are then outstanding which are secured by ordinance, resolution or indenture empowering a trustee or other agent on behalf of the holders of such bonds to consent to said assumption of liability, if such trustee or other agent's consent shall have been obtained in writing, and (d) PEMBROKE PARK shall execute and deliver to HOLLYWOOD, in a form acceptable to HOLLYWOOD, an agreement releasing and holding HOLLYWOOD harmless and indemnifying HOLLYWOOD from any responsibility, liability or claim for or relating to collecting and/or treating PEMBROKE PARK's wastewater from and after the date of termination of this Agreement.

b. Termination by HOLLYWOOD.

(1) There shall be a readily available alternative means of treating and disposing of the wastewater of PEMBROKE PARK which HOLLYWOOD would otherwise be required to treat and dispose of under this Agreement and such alternative means must meet all state, federal and local requirements pertaining to the public health, the pollution of public water and the protection of the environment generally.

(2) Any revenue bonds of the CITY OF HOLLYWOOD payable in whole or in part from wastewater revenues are secured by ordinance, resolution or indenture which requires a trustee or other agent for the holders of such bonds to consent to such termination on their behalf, such trustee or agent shall so consent in writing.

(3) HOLLYWOOD shall pay to PEMBROKE PARK an amount equal to the sum of (a) the actual expenses incurred by

ARTICLE VII. PROVISIONS RELATING TO DEFAULT

1. Default.

a. The parties agree that in the event either party commits an act of default under any of the terms or provisions of this Agreement, the party so defaulting shall be liable to the other party for any expenses, loss or damage occasioned by reason of such default.

b. The parties acknowledge that in order to construct the planned expansion of the HOLLYWOOD System, it is necessary for revenue bonds to be issued from time to time to provide the funding source for said expansion program and, by reason of such obligations incurred by HOLLYWOOD with regard to said bond financing, it is imperative that HOLLYWOOD be paid in a timely fashion the sums due from PEMBROKE PARK pursuant to this Agreement. In light of the obligations to the bondholders, and the acknowledgments that HOLLYWOOD has relied on PEMBROKE PARK's representation that payment of all sums due HOLLYWOOD under the terms of this Agreement shall be prompt in their remittal, the parties hereby agree to resolve disputes over monthly billings in accordance with Section 2 hereof. In the event that PEMBROKE PARK shall have committed an act of monetary default by failing to pay a monthly service bill within forty-five (45) days of receipt of said bill, then PEMBROKE PARK shall pay an interest penalty on the unpaid balance at the rate of 12% per annum and HOLLYWOOD shall have, in addition to any other rights and remedies provided for herein, the right and power, by suit, action, mandamus or other such proceedings at law or in equity,

3. Non-Monetary Default. Except as otherwise expressly provided herein, with respect to non-monetary defaults only, committed by PEMBROKE PARK, the default, if not otherwise resolved after due and diligent effort by both parties, shall be submitted to binding arbitration as set forth in paragraph 4 below.

4. Arbitration. Any non-monetary dispute between HOLLYWOOD and PEMBROKE PARK arising from this Agreement which cannot otherwise be resolved after due and diligent effort by both parties, shall be the subject of binding arbitration. Said arbitration shall be conducted by a board of three arbitrators, each of whom shall be qualified as a licensed engineer or a certified public accountant, or otherwise qualified person, and who shall not be employed by either party on a regular salaried basis. Each party to this Agreement shall choose one arbitrator, and the two so chosen shall choose a third who shall act as chairperson. The fees, charges and expenses of such arbitrators shall be borne equally by the parties hereto. PEMBROKE PARK agrees that during any such period of arbitration, it will continue to promptly make all payments due HOLLYWOOD, pursuant to the terms of this Agreement and Hollywood shall continue to provide wastewater treatment services to PEMBROKE PARK in accordance with the terms hereof.

5. Litigation and Arbitration Costs.

a. PEMBROKE PARK agrees that, to the extent legally permitted, it shall indemnify and hold HOLLYWOOD harmless from and against any and all costs or expenses incurred by HOLLYWOOD in the event of any litigation in which PEMBROKE PARK or HOLLYWOOD is or may become a party as either Plaintiff or Defendant, which results from and is determined to be caused in whole or in part from the effects of the improper introduction of materials by PEMBROKE PARK or any users of PEMBROKE PARK's System into the HOLLYWOOD System, or any portion thereof which may cause damage within or without the HOLLYWOOD System.

b. In the event of litigation between the parties to enforce the terms of this Agreement, then in that event the prevailing party shall be entitled to recover all costs and fees incurred, including but not limited to reasonable attorneys' fees.

6. Fines. In the event any fines, penalties or damages are incurred or imposed by or on HOLLYWOOD by reason of PEMBROKE PARK's violation or default of its obligations under this Agreement, then, in that event, PEMBROKE PARK shall be solely responsible for the payment of same.

7. Force Majeure. The parties agree that in the event of a temporary cessation of wastewater transmission which results from an act of God, hurricane, lightning, fire, strike, casualty, necessary maintenance work, breakdown of machinery, insurrection or riot, that said temporary cessation shall not constitute a default in this Agreement on the part of either of

the parties, and neither party shall be liable to the other for any damage resulting from such cessation, and unless written notice to the contrary is received from any federal, state or local agency, or any court having jurisdiction over the subject matter, HOLLYWOOD shall continue to accept and dispose the wastewater transmitted to it by PEMBROKE PARK if possible, regardless of the degree of treatment available and PEMBROKE PARK, during any such period of interruption or reduced treatment shall continue to pay its share of Debt Service Charges due and the actual costs incurred by HOLLYWOOD. In the event the amount of the Debt Service Charges and actual costs incurred during any period of temporary cessation cannot be determined by reason of no flow, or insufficient flow of wastewater, then the Debt Service Charges and actual costs incurred paid by PEMBROKE PARK shall be based on the twelve (12) month period prior to said interruption of service or reduced treatment.

ARTICLE VIII. ADMINISTRATION

1. Execution and Agreement. The parties hereto agree that upon execution of this Agreement by the appropriate officials of HOLLYWOOD and PEMBROKE PARK, that said Agreement shall be in full force and effect as of the date of said execution, provided that the effective date for billing purposes and calculations of amounts owed shall be as of October 1, 1988. Upon execution, this Agreement shall be filed with the official records of the Broward County Clerk's Office.

2. Large Users Advisory Committee (LUAC). The parties agree that HOLLYWOOD shall, subject to the terms contained herein, have sole and exclusive authority as to the administration, operation and maintenance of the HOLLYWOOD System, including establishment of the annual budget, establishment and amendment of service fees, rates and other charges necessary for the efficient operation and maintenance of the HOLLYWOOD System; provided however, that commencing with the charges to be paid by PEMBROKE PARK during the 1991-92 Fiscal Year and each Fiscal Year thereafter, Hollywood will consult with PEMBROKE PARK and each of the other members of the Large User's Advisory Committee on or before May 15 of each Fiscal Year with respect to establishing the proposed respective fees, rates, RR&I contributions and other charges to be paid by the Large Users in the next ensuing Fiscal Year. In addition, HOLLYWOOD shall have the obligation to meet with the Large Users Advisory Committee at least quarterly to review rate and budgeting matters and the Committee shall have the right to make recommendations to

HOLLYWOOD concerning these matters. HOLLYWOOD also agrees to meet with the Large User's Advisory Committee and discuss any plans relating to relocation of System facilities prior to any definitive action.

3. Invalidity of Provision. In the event it is determined that any section, clause, sentence, or provision of this Agreement shall be invalid, then same shall not affect the validity of any other part of this Agreement which can be given effect without such invalid part or parts. The parties agree that this Agreement shall be binding upon the successors and assigns of the parties hereto and may be enforced by appropriate action of court, or courts of competent jurisdiction.

4. Legal Requirements. The parties agree that each has complied with all necessary legal requirements for execution of this Agreement, including but not limited to due consideration of the terms and conditions hereof by the appropriate governing body of each municipality and its city attorney, and public hearing on this matter; and each party hereto agrees to exchange with the other, certified copies of any official records of its governing body authorizing the execution of this Agreement on its behalf.

5. Notice. Any notice required to be given hereunder in writing shall be considered to be properly given if the same has been sent in writing by certified or registered mail to the following:

HOLLYWOOD: City of Hollywood
2600 Hollywood Boulevard
Hollywood, FL 33021

Attention: City Utilities Director
Copy to: City Attorney

PEMBROKE PARK: _____

_____

_____

6. Prior Agreements. This document, upon its execution by both parties shall supersede any and all prior negotiations, correspondence, conversations, Large User agreements, including the Prior Agreement and any amendments thereto, or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, it is agreed by the parties that there shall be no deviation from the terms hereof which shall be predicated upon any prior representation or agreements whether oral or written, unless said are specifically provided for herein.

7. Modification, Amendment or Alteration. Except as otherwise expressly provided herein as to certain matters which only require written notice, no modification or amendment to the terms or conditions of this Agreement shall be effective unless contained in a supplemental document executed with the same formality of this Agreement and attached hereto.

8. Findings. All of the recitations contained in the preamble of this Agreement are true and correct and incorporated herein by reference.

9. Counterpart Execution. This Agreement may be executed in counterpart originals, each of which shall be deemed an original. PEMBROKE PARK shall provide HOLLYWOOD with a certified copy of PEMBROKE PARK's resolution or evidence of other such action authorizing PEMBROKE PARK to execute this Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the respective dates under each signature.

Signed, sealed and delivered
in the presence of:

Suzanne Torres

Carole Glover

HOLLYWOOD:

CITY OF HOLLYWOOD, a
Municipal Corporation of
the State of Florida

By: Sal Oliveri, Mayor

Dated: Oct. 30, 1990

Attest:

Martha S. Lambos, City Clerk

Prepared and approved as to
form and legality by:

Alan B. Koslow
City Attorney

(See prior page for additional signatures)
(Additional signatures to the Large User Wastewater Agreement between HOLLYWOOD and PEMBROKE PARK)

Approved:

Paul E. Wimberly
Finance Director

for Acting Director

Robert A. Creighton
Utilities Director

PEMBROKE PARK:
a municipal corporation of
the State of Florida

By: Bill Lyddon
BILL LYDDON
Mayor-Commissioner

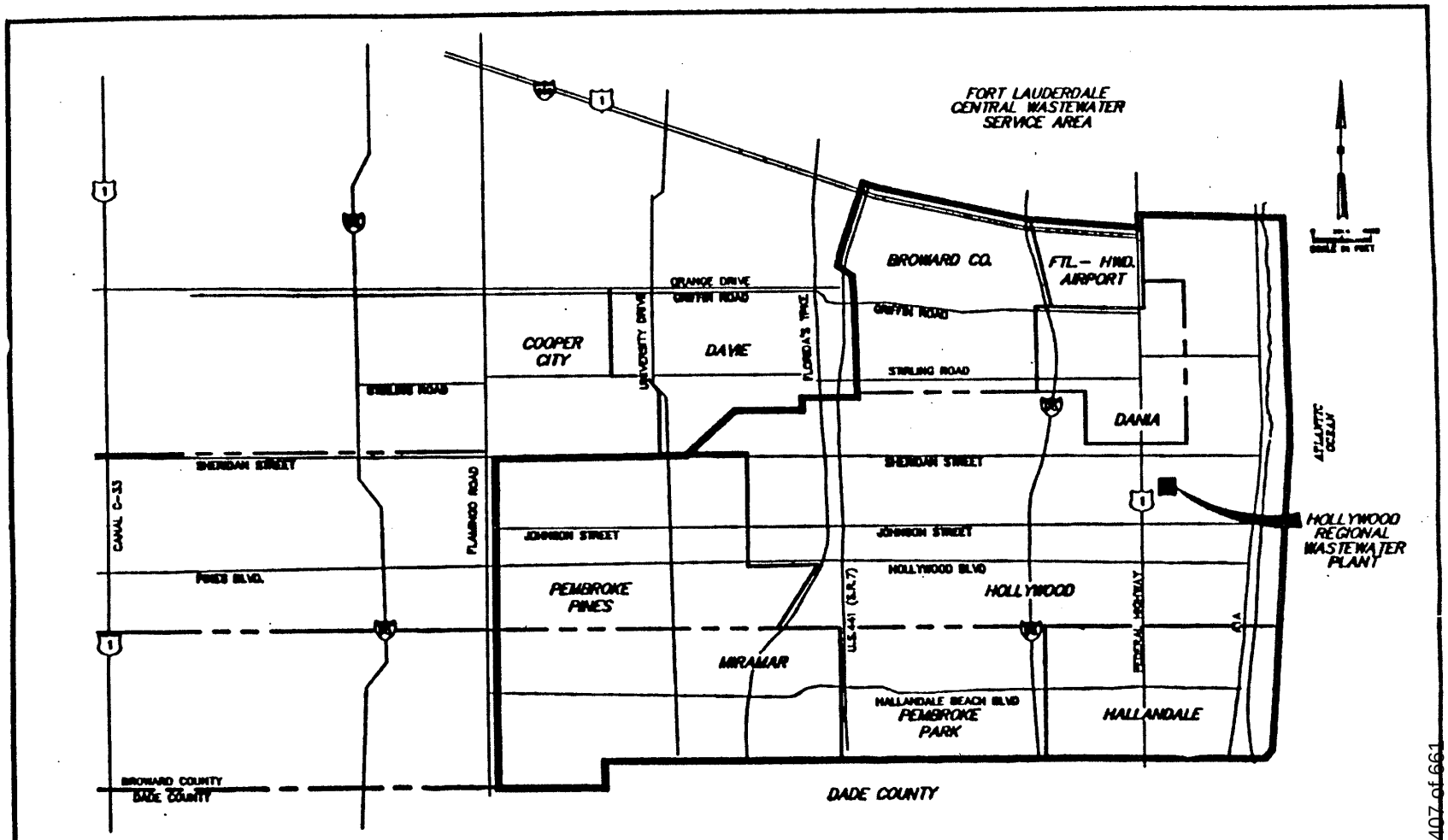
Dated: October 26, 1990

Attest: Theresa Ciummo
Clerk-Commissioner
THERESA CIUMMO

Approved as to Form and Legality:

A. J. RYAN, JR.
Town Attorney

By:_____



LEGEND

SOUTH BROWARD REGIONAL SERVICE AREA

CITY LIMITS

SOUTH BROWARD REGIONAL SERVICE AREA

4840X100

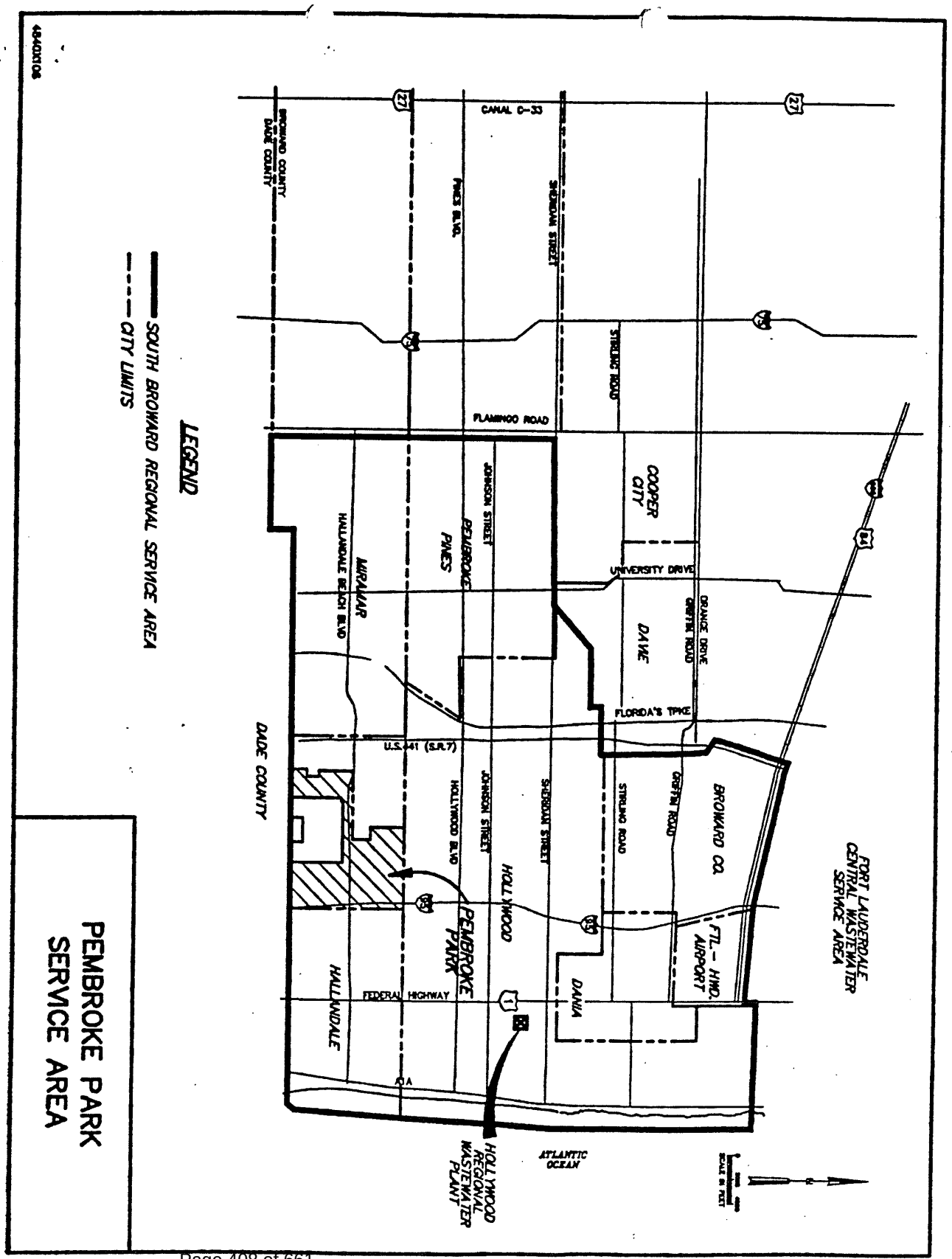

PEMBROKE PARK
SERVICE AREA
LEGEND
SOUTH BROWARD REGIONAL SERVICE AREA
CITY LIMITS
BROWARD COUNTY
DADE COUNTY
CANAL C-33
PINES BLVD.
SHERIDAN STREET
STIRLING ROAD
FLAMINGO ROAD
COOPER CITY
UNIVERSITY DRIVE
ORANGE DRIVE
GRIFFIN ROAD
DAVIE
MIRAMAR
HALLANDALE BEACH BLVD
PEMBROKE PINES
JOHNSON STREET
FLORIDA'S TPKE
U.S. 441 (S.R.7)
HOLLYWOOD BLVD
BROWARD CO.
FTL. - HWD. AIRPORT
PEMBROKE PARK
HOLLYWOOD
DANIA
FEDERAL HIGHWAY
HALLANDALE
A1A
ATLANTIC OCEAN
HOLLYWOOD REGIONAL WASTEWATER PLANT
FORT LAUDERDALE CENTRAL WASTEWATER SERVICE AREA

EXHIBIT "B"

HOLLYWOOD SOUTHERN REGIONAL WWTP

LARGE USER METER AND INTERCONNECT LOCATIONS

1. HALLANDALE
   METER AT LIFT STATION E-8, 800 THREE ISLAND BLVD.
   INTER-CONNECTION AT 13TH AVENUE WASHINGTON STREET
   MANHOLE #B334N

2. HALLANDALE
   METER AT LIFT STATION E-6, 1350 FUNSTON STREET
   INTER-CONNECTION AT 14TH & JACKSON STREET, VANBUREN ALLEY
   MANHOLE B27

3. HALLANDALE
   METER AT U.S. 1 & PEMBROKE ROAD
   INTER-CONNECTION AT 19TH AVENUE & PLUNKETT STREET
   MANHOLE 401A

4. HALLANDALE
   METER AT FLETCHER STREET & 22ND AVENUE
   INTER-CONNECTION AT 23RD TAFT STREET

5. PEMBROKE PARK
   COCA COLA PLANT, PEMBROKE ROAD
   INTER-CONNECTION AT 620 S. RAINBOW
   MANHOLE 353

6. MIRAMAR SEWER PLANT
   INTER-CONNECTION AT JOHNSON STREET & 62ND AVENUE

7. PEMBROKE PINES
   METER AT N.W. 77 WAY, 13TH STREET
   INTER-CONNECTION AT TAFT STREET AND 56TH

8. DANIA
   METER AT SHERIDAN & S.E. 5TH AVENUE
   INTER-CONNECTION AT 14TH & HARDING STREET
   MANHOLE 1002

9. COOPER CITY, DAVIE (TREATED)
   METER AT COOPER CITY AND DAVIE SEWER PLANTS
   INTER-CONNECTION AT HOLLYWOOD SEWER PLANT

10. BROWARD COUNTY
    METERS: S. 40TH AVE. AT 3A WTP
            S. 40TH AVE. AT STIRLING
    INTERCONNECT: N. 56TH AVE. AT TAFT STREET

Exhibit "C" (Continued)

EXHIBIT A.1
Current Flows

EXHIBIT A.1 CURRENT FLOWS

SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT
July 2024 Large User Capacity Report (GPD)

Large User	Encumbered Flow*	Annual Average Daily Flow / Last 12 Months	Total Flow AADF + Enc.	Capacity** Allocations	% of Cap Used	% of Cap Used or Encumbered	Available Capacity
Broward County	756,117	3,877,153	4,633,270	5,883,000	65.90%	78.76%	1,249,730
Dania Beach	2,254,105	3,928,288	6,182,393	5,217,000	75.30%	118.50%	-965,393
Hallandale Beach	1,819,158	7,751,430	9,570,588	8,713,500	88.96%	109.84%	-857,088
Hollywood	1,387,989	18,754,011	20,142,000	21,811,500	85.98%	92.35%	1,669,500
Miramar ***	0	26,449	26,449	1,665,000	1.59%	1.59%	1,638,551
Pembroke Park	258,543	950,309	1,208,852	1,110,000	85.61%	108.91%	-98,852
Pembroke Pines	256,970	7,819,359	8,076,329	11,100,000	70.44%	72.76%	3,023,671
Total	6,732,881	43,107,000	49,839,881	55,500,000			5,660,119

WWTP AADF	**43.1**
Encumbered Flow	**6.7**
Total MGD	**49.8**

* Encumbered flows updated to reflect most recent activity

** 9/30/2012 Plant Capacity Officially Rated at 55.5 MGD

***Miramar Discontinued Monthly Flows to the SRWWTP on 01/10/2011 per Signed Agreement but open their interconnect as an emergency measure.

Updated 8/13/2024

EXHIBIT B
Broward County Interlocal Agreement

See Town Clerk for Resolution

(Resolution Passed Approx. 2003 – 2005)

EXHIBIT C
Coca Cola Rate Agreement

See Town Clerk for Agreement

EXHIBIT C.1
REDUCTION IN VOLUME BASED ON PRODUCTION DISTRIBUTION

See Town Clerk for Agreement

(RESOLUTION PASSED APPROX. 2010)

EXHIBIT C.2
CITY OF HOLLYWOOD EXCESSIVE WASTEWATER PH AND ACIDITY CONCENTRATION

See Town Clerk for Agreement

(RESOLUTION PASSED APPROX. 1996)

EXHIBIT D

MODEL DATA REPORT 2025 EXISTING CONDITIONS

EXHIBIT D.1
GRAVITY SEWER DATA TABLE REPORT

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.91	138.37	157.5	Vitrified Clay
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	3.42	536.17	346.58	154.7	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	PVC
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.33	247.26	147.8	Vitrified Clay
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	2.8	438.06	302.61	144.8	Vitrified Clay
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	2.08	326.45	298.52	109.4	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	2.08	326.45	303.48	107.6	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.64	224.95	106.5	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	1.95	305.93	297.54	102.8	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	2.36	334.06	325.59	102.6	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.05	297.81	101.4	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.32	363.07	362.33	100.2	
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	2.65	360.43	364.07	99	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.83	494.45	91.6	PVC
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	2.45	287.75	342.94	83.9	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.33	454.36	80.4	PVC
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.44	618.26	775.54	79.7	Vitrified Clay
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.87	723.71	912.44	79.3	Vitrified Clay
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.24	349.46	73	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.65	296.91	72	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.13	492.86	692.29	71.2	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.13	307.09	69.4	Vitrified Clay
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.87	452.17	58.4	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	Vitrified Clay
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	204.57	370.12	55.3	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.15	178.63	329.9	54.1	Vitrified Clay
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.17	405.47	751.26	54	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.55	299.18	53.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.69	212.41	53.1	PVC
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.41	197.08	372.16	53	Vitrified Clay
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	168.66	322.05	52.4	Vitrified Clay
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.09	162.43	327.87	49.5	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.4	405.47	856.88	47.3	Vitrified Clay
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	Vitrified Clay
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	2.68	179.44	442.87	40.5	
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.17	344.92	40.3	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.15	558.68	40.3	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.633	192.58	39.8	Vitrified Clay
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.85	299.16	39.1	Vitrified Clay
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.15	288.2	38.6	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136.04	357.52	38.1	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.76	414.13	37.9	PVC
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.25	296.6	36.5	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.53	465.9	34.9	Vitrified Clay
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.33	1067.6	34.2	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.167	128.33	33.6	
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.006	6	0.013	2.03	64.5	200.89	32.1	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.91	479.4	31.1	PVC
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	2.51	136.8	446.82	30.6	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.39	449.63	28.3	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	PVC
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.51	405.47	1443.4	28.1	Vitrified Clay
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	2.02	102.6	370.1	27.7	PVC
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.22	397.39	27.2	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	102.99	380.57	27.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	2.88	142.45	533.77	26.7	Vitrified Clay
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	1.84	88.999	343.16	25.9	Vitrified Clay
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	2.87	136.8	538.07	25.4	PVC
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.84	413.76	25.3	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.45	1071.6	25.2	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.55	488.56	23.9	PVC
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.033	300.43	22.6	Vitrified Clay
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.35	102.6	454.91	22.6	PVC
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.361	410.39	22.3	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.673	399.19	22.2	PVC
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.533	184.22	21.5	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.32	857.64	21.4	
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.036	12	0.012	7.36	694	3269.3	21.2	Ductile Iron
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.333	272.74	20.7	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	PVC
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	2.01	46.17	225.16	20.5	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.078	434.47	20.3	PVC
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	1.79	72.577	358.04	20.3	Vitrified Clay
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.078	436.66	20.2	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.493	236.19	20.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.012	433.85	19.1	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.078	465.75	18.9	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.078	468.18	18.8	PVC
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.94	41.445	223.47	18.5	PVC
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.508	395.17	18.3	PVC
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	4.8	405.47	2230.1	18.2	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.15	79.8	444.28	18	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.633	379.78	17.3	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.649	441.38	17.1	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A4	0.2	162.3	0.003	8	0.01	1.88	67.499	395.19	17.1	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A2	-0.7	102.4	0.004	8	0.01	0.49	76.004	446.05	17	PVC
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.324	358.4	16.6	
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	2.08	71.25	444.4	16	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.119	619.43	15.8	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	2.92	98.119	628.94	15.6	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A3	-0.3	112.6	0.004	8	0.01	2.07	69.074	445.71	15.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.174	492.39	15.5	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	1.67	55.575	362.32	15.3	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.072	522.31	15.3	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	PVC
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	1.53	49.777	335.02	14.9	Vitrified Clay
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.344	399.96	14.1	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.743	435.71	13.7	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A5	0.7	121.8	0.004	8	0.01	2.04	61.199	460.67	13.3	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A1	0.4	95.8	-0.011	8	0.013	0.49	76.004	575.97	13.2	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.365	171.88	13	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.59	864.45	12.7	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.812	724.35	12.5	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.73	3804.2	12.5	
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.733	182.79	12.4	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A7	1.7	100.8	0.004	8	0.01	1.95	54.899	449.6	12.2	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.185	465.32	12.1	PVC
1510	O2L18ASA7	M18A-A7	1.7	M18A-A6	1.2	120	0.004	8	0.01	2	55.844	464.08	12	PVC
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	1.81	49.777	421.82	11.8	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.693	465.86	11.5	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	PVC
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.913	847.57	10.8	Vitrified Clay
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.003	8	0.013	1.15	29.802	276.67	10.8	
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.38	19.71	186.47	10.6	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	1.25	31.35	302.71	10.4	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.198	452.36	10.2	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	1.24	17.19	169.58	10.1	Vitrified Clay
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.041	446.39	10.1	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.041	451.18	10	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.831	482.4	9.9	PVC
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.711	348.09	9.1	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86.002	952.5	9	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.699	500.45	8.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.029	1041.2	8.8	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.853	465.5	8.8	PVC
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	Vitrified Clay
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	1.18	14.67	169.64	8.6	Vitrified Clay
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.365	260.6	8.6	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.916	445.75	8.5	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.475	1150.3	8.3	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.174	923.17	8.3	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.331	843.1	8.2	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.839	1019.8	8.2	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.097	355.25	8.2	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	Vitrified Clay
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	0.617	10	0.013	18.16	628.09	7726.2	8.1	
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.625	295.15	8	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.545	169.51	8	Vitrified Clay
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	0.953	13.8	0.012	29.8	1913.6	24545	7.8	Ductile Iron
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	Vitrified Clay
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.896	311.19	7.4	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.072	450.33	7.3	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.938	630.08	7.3	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	1.11	12.15	169.28	7.2	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.432	480.46	7.2	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.475	1378.3	6.9	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.201	410.79	6.9	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	Vitrified Clay
4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.805	204.55	6.7	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	1.08	19.95	296.94	6.7	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.739	371.09	6.7	
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.462	371.41	6.6	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	5.59	224.49	3518.3	6.4	
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.068	500.5	6.2	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.711	512.97	6.2	PVC
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	5.03	136.8	2218.4	6.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.501	511.59	6.2	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.205	581.9	5.9	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.516	455.56	5.8	PVC
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.66	27.585	476.76	5.8	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.55	2339.4	5.8	Vitrified Clay
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.396	480.62	5.5	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.915	1480.9	5.3	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.058	343.39	5.3	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.236	527.58	5.2	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.217	1150	5.1	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.385	343.06	5.1	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	
848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	1.14	17.1	342.84	5	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	PVC
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.338	493.11	4.7	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.43	2756.8	4.5	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	1.42	19.95	442.78	4.5	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.946	451.2	4.4	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.528	2054.1	4.4	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.368	556.67	4.4	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.482	494.65	4.3	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.7333	181.57	4.3	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.127	404.83	4.2	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.962	356.87	4.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	1.08	14.25	341.52	4.2	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.545	333.55	4.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41.003	1030.2	4	
860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	Vitrified Clay
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.115	287.73	3.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.255	321.66	3.8	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	1.38	17.1	450.68	3.8	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.788	875.9	3.7	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.517	465.42	3.5	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.767	505.55	3.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.435	439.69	3.5	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.237	553.53	3.5	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.901	442.9	3.4	PVC
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.115	334.02	3.3	Vitrified Clay
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.545	320.92	3.3	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.618	416.54	3.3	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.388	506.06	3.2	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	1.3	14.25	446.3	3.2	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.901	467.13	3.2	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.007	6	0.019	0.72	4.41	139.01	3.2	
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.574	428.51	3.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.978	351.02	3.1	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.005	8	0.01	1.4	15.116	484.91	3.1	PVC
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.0375	194.22	3.1	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.127	554.7	3.1	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.662	443.97	3.1	PVC
3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.347	435.75	3.1	PVC
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.7725	230.02	2.9	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.636	709.15	2.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.115	494.2	2.9	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.912	1283.3	2.7	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.175	527.71	2.7	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.802	1147.1	2.6	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.9	8.55	330.07	2.6	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.915	501.36	2.6	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.625	670.63	2.5	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.81	4.135	169.18	2.4	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	Vitrified Clay
673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.901	619.99	2.4	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.805	574.73	2.4	PVC
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.703	669.54	2.3	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.741	463.16	2.3	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.154	530.84	2.3	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.529	1953.9	2.3	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.604	1009.7	2.2	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	2.67	22.8	1025.4	2.2	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.427	470.36	2.2	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.427	471.99	2.2	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.913	864.78	2.2	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.6125	359.79	2.1	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.5625	314.43	2.1	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.255	591.62	2.1	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	Vitrified Clay
788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.1235	303.34	2	Vitrified Clay
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	PVC
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.555	1198.8	2	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.8225	248.74	1.9	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.8737	458.56	1.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.74	5.7	298.04	1.9	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	1.11	8.55	448.05	1.9	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.6771	455.49	1.9	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.0769	341.53	1.8	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.901	837.85	1.8	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.6225	205.41	1.8	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.041	2631.4	1.7	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.3125	487.09	1.7	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.417	2030.2	1.7	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.8517	465.33	1.7	PVC
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	Vitrified Clay
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.5542	470.5	1.6	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	1.05	7.125	444.74	1.6	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.688	1231.2	1.6	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.7375	431.72	1.6	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.396	1782.6	1.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.759	4904.3	1.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.321	1008.4	1.4	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.9925	224.99	1.3	Vitrified Clay
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.795	1873.1	1.3	PVC
1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76.004	5961.7	1.3	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.3625	186.95	1.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.4567	827	1.1	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.4792	222.53	1.1	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.938	1252.3	1.1	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.97	11.4	1025.7	1.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.7917	342.43	1.1	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	Vitrified Clay
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	Vitrified Clay
3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.2208	497.45	1	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A6	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.252	4982.7	1	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.5675	477.36	1	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.3337	350.8	1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.88	3.99	446.55	0.9	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.5675	516.97	0.9	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	Vitrified Clay
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	0.74	3.15	386.07	0.8	
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.7198	975.16	0.8	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.5625	451.05	0.8	PVC
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	Vitrified Clay
1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.0875	1048.7	0.7	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.1375	341.77	0.6	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A10	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.0417	349.5	0.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.3333	404.28	0.6	
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	PVC
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.0475	361.35	0.6	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	1.55	2.85	508.53	0.6	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.974	3305.6	0.5	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.8583	560.08	0.5	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.8583	581.84	0.5	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.625	12469	0.5	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.0883	471.24	0.4	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.0883	476.91	0.4	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	Vitrified Clay
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	Vitrified Clay
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A3	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.3168	823.44	0.4	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.2625	70.459	0.4	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.2625	73.273	0.4	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	PVC
566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.5799	475.18	0.3	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	Vitrified Clay
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	0.47	1.0417	317.28	0.3	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.7875	256.41	0.3	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.0417	687.31	0.3	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	1.66	3.465	1177.4	0.3	PVC
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.255	8266.1	0.3	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.2417	2221.4	0.3	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.46667	174.81	0.3	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	Vitrified Clay
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.0442	423.66	0.2	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.0442	451.48	0.2	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.2625	120.45	0.2	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	Vitrified Clay
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0.01	1.285	652.28	0.2	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.7875	466.92	0.2	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.7125	432.09	0.2	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.2625	171.43	0.2	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A5	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.8292	2162.4	0.1	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.2625	202.47	0.1	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	Vitrified Clay

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.2625	280.02	0.1	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.2625	343.6	0.1	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.2625	358.36	0.1	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.2625	429.13	0.1	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.0442	2376.2	0	PVC
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.2625	2474.3	0	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	0	0	266.59	0	Vitrified Clay
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	PVC

Model Gravity Sewer Data Table 2025 Existing Conditions
Exhibit D1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	PVC

EXHIBIT D.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
359	M3A1	6.4	6.4	8964	-1.8	356.9	6.225	363.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.7	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1914	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	536.2	0	536.17	1.17	-2.4	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.12	1.995	98.119	0.76	-2.3	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.62	25.3	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.313	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.888	2.888	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.3	22.05	365.33	0.71	-1.2	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	2.27	1.8	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.5	17.1	159.55	1.66	2.1	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	1.4	3.5	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94	11.4	105.4	0.81	3.6	FALSE	TRUE
1107	M14C4	6.2	6.2	5582.01	-1.4	302.1	3.876	305.93	2.24	0.9	FALSE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	305.9	20.52	326.45	2.19	-0.1	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	326.5	0	326.45	2.18	-0.2	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	438.1	0	438.06	2.12	-0.6	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	1.48	2	FALSE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	1.08	2.1	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.39	4.782	76.174	1.41	-0.2	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	0.78	2.1	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.08	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.044	1.0442	0.02	5	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.5	2.363	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.96	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634	11.16	645.2	0.78	-3.6	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.94	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.62	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.64	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.317	3.3168	0.04	0	FALSE	TRUE
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.738	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.334	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.467	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.69	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.63	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.3	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.263	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.263	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4266	M37A5	5	5	1503.6	3	0	1.044	1.0442	0.02	3	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.993	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.81	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	0.04	4.9	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
67	M17A9	8.5	8.5	16416	0	349	11.4	360.43	0.54	0.5	FALSE	FALSE
68	M17J1	8.8	8.8	16416	3.7	3.563	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.713	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	196.9	7.695	204.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.13	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.3	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.19	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	162	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.6	14.38	694	0.53	-4.1	FALSE	FALSE
530	M14A1	6.3	6.3	0	-4	628.1	0	628.09	0.53	-3.4	FALSE	FALSE
534	M14A3	5.9	5.9	0	-2.6	98.12	0	98.119	0.24	-2.4	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.93	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.53	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.73	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.13	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.733	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.63	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.313	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.313	8.313	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.16	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.51	16.16	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.67	16.16	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.8	7.852	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.31	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.457	9.457	18.913	0.09	2.3	FALSE	FALSE
632	M36H1	8.8	8.8	11306.4	3	15.7	7.852	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.852	7.852	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.852	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.34	16.16	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.457	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.9	7.852	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.6	53.1	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.8	35.03	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.33	10.74	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.22	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.74	10.74	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.74	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.37	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.8	0	29.802	0.15	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
674	M36B6	5.7	5.7	21457.8	3	0	14.9	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.9	0	14.901	0.08	2.1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
677	M36B3	6.4	8.3	3439.8	-0.1	70.8	2.389	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.08	1.523	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.03	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.07	10.74	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.8	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.9	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	405.5	0	405.47	0.4	-1.7	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.04	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.04	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.92	7.125	45.041	0.14	1.9	FALSE	FALSE
700	M17L4	7.6	7.6	16416	2.3	26.52	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.12	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.12	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	166.7	1.995	168.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	2.71	1.425	4.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	1.285	1.285	6.93	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	176.1	2.565	178.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.55	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.4	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.792	3.7917	0.05	3.6	FALSE	FALSE
900	M23B1	5.4	5.4	56700	1.9	3.792	39.38	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.333	2.3333	0.04	2.2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	22.23	5.355	27.585	0.11	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	38.3	3.15	41.445	0.15	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	17.19	2.52	19.71	0.11	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	14.67	2.52	17.19	0.11	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	12.15	2.52	14.67	0.1	1.9	FALSE	FALSE
929	M5A8	6.3	6.3	4082.4	3.1	0.315	11.84	12.15	0.09	3.2	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.33	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.623	3.15	6.7725	0.06	3.1	FALSE	FALSE
966	M4G2	7.4	7.4	907.2	5.4	2.993	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.838	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.838	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.7	9.562	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.413	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.263	2.888	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.263	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.263	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.3	0	365.33	0.43	-1.6	FALSE	FALSE
999	M34A4	4.1	4.1	0	-3	365.3	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.042	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	491	1.889	492.86	0.64	-5.8	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	405.5	0	405.47	0.4	-3	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	618.3	0	618.26	0.67	-6	FALSE	FALSE
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE
1056	M17A1	8.6	8.6	41040	-7	695.2	28.5	723.71	0.65	-6.3	FALSE	FALSE
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.17	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.54	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.39	2.85	19.237	0.09	2.6	FALSE	FALSE
1080	M17A10	8.7	8.7	6156	0.6	329.8	4.275	334.06	0.56	1.1	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1086	M17A12	9.4	9.4	80028	4	0	55.58	55.575	0.18	4.2	FALSE	FALSE
1087	M17A11	8.9	8.9	32832	1.6	265	22.8	287.75	0.47	2	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1101	M14D2	4.9	4.9	16416	1.3	131.1	11.4	142.45	2.14	3.4	FALSE	FALSE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	0.13	3.6	FALSE	FALSE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	0.3	2.1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	0.12	2.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.04	-1.9	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.58	5.415	88.999	0.23	-2.1	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.63	15.28	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.63	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.17	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.97	3.42	17.385	0.24	-0.2	FALSE	FALSE
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.51	1.425	27.93	0.13	0.5	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.96	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.713	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.713	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.83	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	197.1	27.42	224.49	0.29	-1.1	FALSE	FALSE
1270	M22F1	4.7	4.7	0	-1.8	0	0	0	1.26	-0.5	FALSE	FALSE
1274	M22A2	4.8	4.8	20412	-0.8	182.9	14.18	197.08	0.34	-0.4	FALSE	FALSE
1276	M22B1	6.2	6.2	3628.8	1.2	0.945	2.52	3.465	0.04	1.2	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	162.4	17.01	179.44	0.3	1.2	FALSE	FALSE
1284	M22A5	5.4	5.4	4536	2.2	0	3.15	3.15	0.04	2.2	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.03	0	FALSE	FALSE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	0.33	2.1	FALSE	FALSE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	0.08	2.6	FALSE	FALSE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	0.06	3.2	FALSE	FALSE
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	0.1	2.5	FALSE	FALSE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	0.06	3.3	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.53	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.08	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.08	0	88.078	0.1	1.6	FALSE	FALSE
1330	M40A4	7.5	7.5	0	2.7	88.08	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.98	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.258	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	236	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.71	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.96	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.568	4.306	8.8737	0.06	2.8	FALSE	FALSE
1359	M16A8	6.1	6.1	0	3.5	4.568	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.788	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.788	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.048	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.048	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.66	1.044	44.699	0.14	-0.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1370	M37A3	5.4	5.4	4510.8	-1.6	44.7	3.133	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.088	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.76	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.309	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.088	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.088	3.133	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.044	1.0442	0.02	-0.4	FALSE	FALSE
1393	M17B1	8.8	8.8	0	2.2	136.8	0	136.8	0.24	2.4	FALSE	FALSE
1395	M17B2	9	9	0	2.6	136.8	0	136.8	0.26	2.8	FALSE	FALSE
1397	M17B3	8	8	32832	3.4	114	22.8	136.8	0.26	3.7	FALSE	FALSE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	0.07	3.8	FALSE	FALSE
1401	M17B4	8.1	8.1	0	4	102.6	0	102.6	0.44	4.5	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	91.2	11.4	102.6	0.22	4.9	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.07	5	FALSE	FALSE
1407	M17B6	7.7	7.7	16416	5.6	68.4	11.4	79.8	0.19	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.27	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.042	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.74	0	59.743	0.17	-1	FALSE	FALSE
1426	M32C1	5.7	5.7	0	0	13.81	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.07	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.54	8.531	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.52	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.67	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.21	19.49	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.48	38.95	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.34	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.77	5.571	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.72	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.263	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.1	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.1	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.088	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.5	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.83	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.25	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.9	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.32	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.4	8.021	34.417	0.11	-0.9	FALSE	FALSE
1521	M34C2	7.1	7.1	0	-0.3	26.4	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.6	3.792	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.604	22.604	0.1	3	FALSE	FALSE
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.21	5.59	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.43	0	10.427	0.07	2.3	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1536	M34B3	5.7	5.7	2520	2.9	8.677	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.58	7.097	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.58	1.5799	0.03	4.3	FALSE	FALSE
1550	M17F1	9.1	9.1	32832	2.8	49.78	22.8	72.577	0.2	3	FALSE	FALSE
1552	M17F2	8.9	8.9	0	3.9	49.78	0	49.777	0.17	4.1	FALSE	FALSE
1554	M17F3	10.9	10.9	70178.4	4	1.042	48.74	49.777	0.15	4.2	FALSE	FALSE
1556	M17F4	10	10	1500	5.2	0	1.042	1.0417	0.03	5.2	FALSE	FALSE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	0.46	3.4	FALSE	FALSE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	0.1	3.5	FALSE	FALSE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	0.09	3.9	FALSE	FALSE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.09	4.3	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.05	2.858	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.18	5.717	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.48	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.38	8.094	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.554	16.91	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.554	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.71	31.21	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.077	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.077	6.077	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.87	6.077	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.12	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1695	M38A5	4.9	4.9	18901.68	-2.1	19.95	13.13	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.07	13.13	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.2	13.13	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.3	27.07	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.94	27.07	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.3	13.95	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.24	13.62	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.62	13.62	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.3	10.73	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.829	3.471	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.858	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.242	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.242	8.079	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.858	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.829	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.72	10.05	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	23	1.26	24.255	0.09	-1.5	FALSE	FALSE
3102	M34G1	5.2	5.2	68390	3.8	0	47.49	47.493	0.16	4	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.878	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.263	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.263	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.263	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.263	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.888	2.888	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.263	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.33	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.59	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.84	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.47	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.98	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.11	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.5	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.46	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.35	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.03	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.8	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.01	6.878	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.83	17.18	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.43	34.432	0.13	2.1	FALSE	FALSE
3642	M18A-A1	5.1	5.1	0	-1	76	0	76.004	0.17	-0.8	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3682	M22A4	5.5	5.5	0	1.6	162.4	0	162.43	0.33	1.9	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.334	4.996	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.467	2.013	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.94	49.61	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.63	23.63	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	43.97	2.205	46.17	0.16	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.37	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE

Model Manhole Data Table 2025 Existing Conditions
Exhibit D2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.9	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.263	2.363	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.13	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.86	10.13	102.99	0.24	0.1	FALSE	FALSE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	0.07	3.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	405.5	0	405.47	0.59	-5.8	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	405.5	0	405.47	0.52	-5.2	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.66	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.29	12.24	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT D.3
FORCE MAIN DATA TABLE REPORT

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB2	PMP-18A-b	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

Model Forcemain Data Table 2025 Existing Conditions
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA2	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

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3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

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1791	O2L26FB1	W-26	PMP-26B	PVC	0.1	7.7	20	0.01	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA1	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
435	O2L18A-FA2	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
436	O2L18A-FA1	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3651	O2L34BYEPA	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 2025 Existing Conditions
Exhibit D3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

EXHIBIT D.4
PRESSURE NODE DATA TABLE REPORT

Model Pressure Node Data Table 2025 Existing Conditions
Exhibit D4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 2025 Existing Conditions
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3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE

Model Pressure Node Data Table 2025 Existing Conditions
Exhibit D4

1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT D.5.
PUMP DATA TABLE REPORT

Model Pump Data Table 2025 Existing Conditions
Exhibit D5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Table 2025 Existing Conditions
Exhibit D5

49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9

Model Pump Data Table 2025 Existing Conditions
Exhibit D5

64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
482	PMP4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT D.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 2025 Existing Conditions
Exhibt D6

ID	Label	Elev (Grd) (ft)	Elev (Invt) (ft)	Boundary Condition Type	Elev (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1019.9	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday in August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3723.9	Measured 10 psi or 23 feet of Head on Monday 6/12/2023

EXHIBIT E.1
Gravity Sewer Date Table Report

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	4.22	660.86	346.58	190.7	93.6	Vitrified Clay
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	3.59	562.74	302.61	186	100	Vitrified Clay
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.91	138.37	157.5	92.2	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	92.2	PVC
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	2.88	451.14	298.52	151.1	100	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	2.88	451.14	303.48	148.7	100	Vitrified Clay
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.33	247.26	147.8	82	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	2.75	430.62	297.54	144.7	100	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	2.77	434.53	325.59	133.5	100	Vitrified Clay
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	2.94	460.89	364.07	126.6	86.1	Vitrified Clay
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	2.48	388.21	342.94	113.2	100	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.64	224.95	106.5	75	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.05	297.81	101.4	100	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.32	363.07	362.33	100.2	81.9	
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.71	362.49	372.16	97.4	71.8	Vitrified Clay
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.5	718.72	775.54	92.7	72.9	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.83	494.45	91.6	73.4	PVC
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.93	824.17	912.44	90.3	64.2	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.21	593.32	692.29	85.7	73.9	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.33	454.36	80.4	84	PVC
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.29	244.36	327.87	74.5	59.8	Vitrified Clay
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.24	349.46	73	81.7	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.65	296.91	72	80.4	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.13	307.09	69.4	62.1	Vitrified Clay
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.29	505.93	751.26	67.3	64	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.53	505.93	856.88	59	70.4	Vitrified Clay
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	2.94	261.37	442.87	59	67.5	
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.87	452.17	58.4	59.8	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	53.2	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	53.6	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	204.57	370.12	55.3	77	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	52	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.15	178.63	329.9	54.1	53.2	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.55	299.18	53.3	100	Vitrified Clay
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.69	212.41	53.1	45.9	PVC
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	168.66	322.05	52.4	51.9	Vitrified Clay
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	50.2	Vitrified Clay
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.17	344.92	40.3	72.1	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.15	558.68	40.3	42.5	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	43.4	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.633	192.58	39.8	36.6	Vitrified Clay
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.85	299.16	39.1	100	Vitrified Clay
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	2.67	173.14	446.82	38.7	92	PVC
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.15	288.2	38.6	100	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136.04	357.52	38.1	43.5	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.76	414.13	37.9	53.7	PVC
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	2.19	138.94	370.1	37.5	40.6	PVC
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.25	296.6	36.5	100	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	100	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	42.6	Vitrified Clay
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.73	505.93	1443.4	35.1	42.8	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.53	465.9	34.9	46.7	Vitrified Clay
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.33	1067.6	34.2	66	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.167	128.33	33.6	31.1	
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	3.06	173.14	538.07	32.2	63.7	PVC
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.006	6	0.013	2.03	64.5	200.89	32.1	38.3	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.91	479.4	31.1	41.4	PVC
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.55	138.94	454.91	30.5	55.6	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.39	449.63	28.3	36.7	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	40.5	PVC

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Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	1.96	101.08	358.04	28.2	78.9	Vitrified Clay
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.22	397.39	27.2	45.3	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	102.99	380.57	27.1	34.9	Vitrified Clay
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	0.91	142.45	533.77	26.7	100	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.38	116.14	444.28	26.1	36.9	PVC
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	1.84	88.999	343.16	25.9	97.8	Vitrified Clay
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.84	413.76	25.3	43	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.45	1071.6	25.2	37.8	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	1.92	91.2	362.32	25.2	32.7	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.55	488.56	23.9	34.3	PVC
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	1.74	78.277	335.02	23.4	45.4	Vitrified Clay
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	5.12	505.93	2230.1	22.7	52.4	Vitrified Clay
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.033	300.43	22.6	69.4	Vitrified Clay
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.361	410.39	22.3	33.8	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.673	399.19	22.2	33.2	PVC
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	1.97	85.088	386.07	22	48.1	
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.533	184.22	21.5	33.3	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.32	857.64	21.4	100	
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.036	12	0.012	7.36	694	3269.3	21.2	69.1	Ductile Iron
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.333	272.74	20.7	36.3	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	45.6	PVC
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	2.01	46.17	225.16	20.5	31.2	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.078	434.47	20.3	30.5	PVC
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.078	436.66	20.2	30.5	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.493	236.19	20.1	66.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.012	433.85	19.1	29.6	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	29.8	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.078	465.75	18.9	30	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.078	468.18	18.8	33.8	PVC
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	30.3	

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Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	2.06	78.277	421.82	18.6	31.1	Vitrified Clay
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.94	41.445	223.47	18.5	30.8	PVC
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.508	395.17	18.3	30.6	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	28.8	
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	100	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.633	379.78	17.3	28.6	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.649	441.38	17.1	28.6	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A	0.2	162.3	0.003	8	0.01	1.88	67.499	395.19	17.1	55.5	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A	-0.7	102.4	0.004	8	0.01	0.49	76.004	446.05	17	100	PVC
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.324	358.4	16.6	32.2	
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	0.45	71.25	444.4	16	100	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.119	619.43	15.8	100	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	50.5	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	0.63	98.119	628.94	15.6	100	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A	-0.3	112.6	0.004	8	0.01	2.07	69.074	445.71	15.5	91.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.174	492.39	15.5	64.2	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.072	522.31	15.3	30.1	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	29	PVC
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	26.8	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.344	399.96	14.1	27.2	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.743	435.71	13.7	25	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A	0.7	121.8	0.004	8	0.01	2.04	61.199	460.67	13.3	26.6	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A	0.4	95.8	-0.011	8	0.013	0.49	76.004	575.97	13.2	64.1	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.365	171.88	13	23.1	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.59	864.45	12.7	67.1	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.812	724.35	12.5	43	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.73	3804.2	12.5	71.6	
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.733	182.79	12.4	27.6	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A	1.7	100.8	0.004	8	0.01	1.95	54.899	449.6	12.2	24	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.185	465.32	12.1	23.8	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1510	O2L18ASA7	M18A-A7	1.7	M18A-A	1.2	120	0.004	8	0.01	2	55.844	464.08	12	24.7	PVC
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	23.1	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	24.4	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.693	465.86	11.5	30.1	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	28.5	PVC
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	6.58	389.91	3518.3	11.1	31.1	
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	31.7	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	22.1	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.913	847.57	10.8	46.6	Vitrified Clay
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.003	8	0.013	1.15	29.802	276.67	10.8	19.8	
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	100	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.38	19.71	186.47	10.6	22.2	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	25.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	28.7	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	0.2	31.35	302.71	10.4	100	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	21.7	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.198	452.36	10.2	21.8	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	1.24	17.19	169.58	10.1	21.7	Vitrified Clay
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.041	446.39	10.1	21.5	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.041	451.18	10	21.5	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.831	482.4	9.9	23.3	PVC
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	0.617	10	0.013	19.16	752.77	7726.2	9.7	84.9	
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	1.27	29.542	317.28	9.3	24.9	Vitrified Clay
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.711	348.09	9.1	21.7	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86.002	952.5	9	19.1	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	21.7	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.699	500.45	8.9	21.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.029	1041.2	8.8	65.6	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.853	465.5	8.8	20.3	PVC
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	82.2	Vitrified Clay

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Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	1.18	14.67	169.64	8.6	20.7	Vitrified Clay
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.365	260.6	8.6	26.5	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.916	445.75	8.5	20.7	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	20.3	Vitrified Clay
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.475	1150.3	8.3	25.7	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	24.4	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.174	923.17	8.3	62	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.331	843.1	8.2	28	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.839	1019.8	8.2	20.1	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.097	355.25	8.2	19.7	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	41.9	Vitrified Clay
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.625	295.15	8	26	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.545	169.51	8	21.7	Vitrified Clay
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	0.71	173.14	2218.4	7.8	100	PVC
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	0.953	14	0.012	29.8	1913.6	24545	7.8	87.2	Ductile Iron
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	19	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	20.2	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	19	Vitrified Clay
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	4.39	86.94	1177.4	7.4	55	PVC
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.896	311.19	7.4	17.7	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.072	450.33	7.3	18.4	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.938	630.08	7.3	23.4	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	70.1	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	1.11	12.15	169.28	7.2	19	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	21.6	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.432	480.46	7.2	24.3	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	30.3	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.475	1378.3	6.9	22.8	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.201	410.79	6.9	22.7	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	21.1	Vitrified Clay

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4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.805	204.55	6.7	17.3	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	0.13	19.95	296.94	6.7	100	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	23.1	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.739	371.09	6.7	22.2	
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.462	371.41	6.6	24.6	Vitrified Clay
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.068	500.5	6.2	19.9	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	27.9	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	27.9	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.711	512.97	6.2	19.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.501	511.59	6.2	100	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	19.3	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	35.9	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	16.6	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	33.8	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.205	581.9	5.9	21.2	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	17.6	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.516	455.56	5.8	18.2	PVC
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.66	27.585	476.76	5.8	19.7	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.55	2339.4	5.8	100	Vitrified Clay
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.396	480.62	5.5	16.7	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	16.2	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	16.6	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.915	1480.9	5.3	58.6	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	18.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.058	343.39	5.3	51	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.236	527.58	5.2	18.7	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.217	1150	5.1	20.2	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	15.3	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.385	343.06	5.1	67.9	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	18.3	

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848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	17.4	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	0.11	17.1	342.84	5	100	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	33.1	Vitrified Clay
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	59.8	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	15	PVC
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	14.1	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	17.1	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.338	493.11	4.7	17	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	14.9	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.43	2756.8	4.5	68.3	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	15.2	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	14.2	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	0.13	19.95	442.78	4.5	100	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.946	451.2	4.4	14.3	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	57.1	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	13.8	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.528	2054.1	4.4	22.9	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.368	556.67	4.4	57.9	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	42	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.482	494.65	4.3	20.9	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	18	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	14.5	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.7333	181.57	4.3	18.9	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.127	404.83	4.2	16.7	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	16.5	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	15.1	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.962	356.87	4.2	13.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	0.09	14.25	341.52	4.2	100	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.545	333.55	4.1	20.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41.003	1030.2	4	13	

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	14.3	Vitrified Clay
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.115	287.73	3.9	13.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.255	321.66	3.8	33.7	Vitrified Clay
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	0.11	17.1	450.68	3.8	100	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.788	875.9	3.7	27.5	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	25.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	100	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.517	465.42	3.5	15.4	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	16	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.767	505.55	3.5	14.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.435	439.69	3.5	100	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.237	553.53	3.5	13.4	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.901	442.9	3.4	12.4	PVC
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.115	334.02	3.3	13.5	Vitrified Clay
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.545	320.92	3.3	12.9	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	62.5	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.618	416.54	3.3	14.6	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	12.7	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	12.2	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.388	506.06	3.2	13.5	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	0.09	14.25	446.3	3.2	100	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.901	467.13	3.2	15	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.007	6	0.019	0.72	4.41	139.01	3.2	10.9	
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	12.4	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.574	428.51	3.2	18.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.978	351.02	3.1	13.8	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.005	8	0.01	1.4	15.116	484.91	3.1	14.5	PVC
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.0375	194.22	3.1	48.3	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.127	554.7	3.1	13.6	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.662	443.97	3.1	12.6	PVC

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.347	435.75	3.1	12	PVC
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	17.3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	12.6	Vitrified Clay
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.7725	230.02	2.9	21.5	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	17.8	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	13.2	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.636	709.15	2.9	44.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.115	494.2	2.9	16	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	16.2	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	14.1	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	14.4	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.912	1283.3	2.7	19.1	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.175	527.71	2.7	13.1	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	21.3	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.802	1147.1	2.6	36.2	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	24.9	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.05	8.55	330.07	2.6	100	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.915	501.36	2.6	14.5	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	16.4	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	15.7	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	23.1	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	13.8	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	13	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.625	670.63	2.5	19.2	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	100	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	11.6	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	100	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.81	4.135	169.18	2.4	39.7	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	10.6	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	18.3	Vitrified Clay

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673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.901	619.99	2.4	17.2	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.805	574.73	2.4	11.3	PVC
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	10.9	Vitrified Clay
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	55.5	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	14.8	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.703	669.54	2.3	14.1	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	14.6	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	100	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.741	463.16	2.3	12.7	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	12.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	10.6	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.154	530.84	2.3	10.8	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.529	1953.9	2.3	65.6	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	22.9	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	16.5	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.604	1009.7	2.2	10.7	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	0.15	22.8	1025.4	2.2	100	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.427	470.36	2.2	10.3	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.427	471.99	2.2	13.1	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.913	864.78	2.2	27	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	13.4	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	14.4	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.6125	359.79	2.1	50.8	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.5625	314.43	2.1	25.2	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	10.2	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.255	591.62	2.1	23.5	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	42	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	12.1	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	11	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	10.3	Vitrified Clay

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788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	14.9	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.1235	303.34	2	17.8	Vitrified Clay
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	17.1	Vitrified Clay
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	11.1	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	17.5	PVC
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	13.3	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.555	1198.8	2	20.5	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	9.8	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	10.7	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	12.8	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.8225	248.74	1.9	15.4	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.8737	458.56	1.9	13.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.04	5.7	298.04	1.9	100	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	0.05	8.55	448.05	1.9	100	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.6771	455.49	1.9	10	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	11.7	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	100	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	11.5	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	9.6	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	31.7	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	9.2	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.0769	341.53	1.8	8.6	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.901	837.85	1.8	17.2	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.6225	205.41	1.8	10.6	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	25.2	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.041	2631.4	1.7	44.3	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.3125	487.09	1.7	11.1	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.417	2030.2	1.7	32	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.8517	465.33	1.7	10.8	PVC
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	18.6	Vitrified Clay

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	10.2	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	10.5	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	10.4	Vitrified Clay
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	54.5	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	100	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	35.8	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	13.9	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	20	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	12.9	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.5542	470.5	1.6	13.1	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	0.05	7.125	444.74	1.6	100	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.688	1231.2	1.6	16.2	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.7375	431.72	1.6	8.5	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	8.3	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	13.2	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	10.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	10.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.396	1782.6	1.5	12.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	8.8	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	12.3	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	39.3	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	10.3	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.759	4904.3	1.4	12.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.321	1008.4	1.4	10.3	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	10	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	24.5	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	11	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	9.1	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.9925	224.99	1.3	8.7	Vitrified Clay
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.795	1873.1	1.3	58	PVC

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1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	9.9	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	10.4	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	12.5	PVC
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	7.9	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76.004	5961.7	1.3	58.4	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.3625	186.95	1.3	67.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	9.5	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	9.3	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	58.6	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	9	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	32.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	8	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	61	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	8.3	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	10.6	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	9.4	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	8.7	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.4567	827	1.1	11.9	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	58.7	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	8.7	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	7.5	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	7.3	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.4792	222.53	1.1	7.3	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.938	1252.3	1.1	7.3	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.97	11.4	1025.7	1.1	18.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.7917	342.43	1.1	23.7	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	100	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	8.4	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	8.2	Vitrified Clay
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	65.2	Vitrified Clay

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3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.2208	497.45	1	9.7	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	10.3	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	9.4	
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	8.8	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	8.9	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	12.9	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	16.2	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	41.5	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.252	4982.7	1	56.7	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	8.4	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	7.3	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.5675	477.36	1	8.3	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.3337	350.8	1	8.1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	10.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	9.5	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	11.5	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.88	3.99	446.55	0.9	59.1	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.5675	516.97	0.9	6.8	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	8.2	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	8	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	7.8	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	9.2	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	7.3	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	12.5	Vitrified Clay
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	8.2	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	7.4	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	13.9	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.7198	975.16	0.8	7.6	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.5625	451.05	0.8	10.1	PVC
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	8.3	Vitrified Clay

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1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	10.3	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	7.2	Vitrified Clay
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	14.9	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	8.3	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	19.4	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	51.1	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	20.4	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	6	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	24.4	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.0875	1048.7	0.7	9	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	6.2	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	11.1	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	13.8	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	9.3	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	10.9	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	10.9	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	14.8	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.1375	341.77	0.6	10.7	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	8.5	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	11.1	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	6.5	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	28	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A1(	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	12.3	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	6.9	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	12.3	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	7.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.0417	349.5	0.6	6.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	26.5	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.3333	404.28	0.6	13.8	
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	11.9	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.0475	361.35	0.6	7.1	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	1.55	2.85	508.53	0.6	75	
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.974	3305.6	0.5	6.7	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	5.1	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	13.7	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	5.7	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	9.9	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	7.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.8583	560.08	0.5	11.9	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	14.1	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	11	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	6.3	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	6.1	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	20.4	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	5.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.8583	581.84	0.5	11.2	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	6	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	7	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.625	12469	0.5	57.4	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	8.2	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	23	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	37.3	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	15	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	53.1	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	8.1	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.0883	471.24	0.4	8.5	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.0883	476.91	0.4	14.5	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	5.1	Vitrified Clay
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	6.9	Vitrified Clay

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	12.1	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	52.3	PVC
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	4.9	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	7.6	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	50.7	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	19.6	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.3168	823.44	0.4	40.5	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	6.8	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	6.5	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	7	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	8	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	5.2	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	5.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	5.2	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.2625	70.459	0.4	7.7	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	25.3	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	9.8	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	7.9	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	8.3	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.2625	73.273	0.4	11.9	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	6.6	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	5.9	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	8.3	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	7.9	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	6.5	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	6	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	6.4	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	5.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	7.4	
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	7	PVC

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ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	8	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	7.7	
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	7.9	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.5799	475.18	0.3	6.9	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	6.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	4.4	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	9.7	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	84	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	4.8	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	4.8	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	9.2	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	6.6	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	5.9	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.7875	256.41	0.3	7.1	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.0417	687.31	0.3	44.8	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	22.2	
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.255	8266.1	0.3	54.7	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	17.7	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	9.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	5	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	7.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	6	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.2417	2221.4	0.3	6.5	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	6.6	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	10.1	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.4667	174.81	0.3	5.6	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	5.7	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	19.2	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	6.6	Vitrified Clay
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	19.4	Vitrified Clay

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Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	6.6	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.0442	423.66	0.2	16.7	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	14.7	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.0442	451.48	0.2	5.4	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	3.6	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	4.9	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.2625	120.45	0.2	11.9	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	5.7	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	10	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	51.7	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	6.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	6.6	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	6.2	Vitrified Clay
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0.01	1.285	652.28	0.2	55.4	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	5.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	10.7	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	6.1	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	8.6	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	6.5	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	100	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	6	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	4.7	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	52	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	5.7	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	6.5	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	8.1	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	7	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	5.3	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	5	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.7875	466.92	0.2	4.9	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	4.3	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	5	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	7	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.7125	432.09	0.2	4.4	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	5.1	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	7.8	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	5.3	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	6.6	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	4.4	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	5.3	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	10	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	4.9	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	5.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	26.7	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	52	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	9.4	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	3.6	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.2625	171.43	0.2	6	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	9.1	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	6.4	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	5.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	15.4	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	8.4	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	18.9	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	51.4	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	6.8	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	4.2	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	6.3	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	9.7	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	51.8	Vitrified Clay

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Exhibit E1

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4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	5.7	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	3.9	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	38.6	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	7.3	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	5.7	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.8292	2162.4	0.1	4.4	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	4.7	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	6.3	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	8.3	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.2625	202.47	0.1	11.9	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	15.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	4.6	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	4.2	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	100	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	3.7	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	5	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	8.9	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	45.9	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	9.8	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	4.7	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	13.5	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	6.9	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	21.5	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	5	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	4.8	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	3.8	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	4.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	4.6	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	2.5	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	4.4	Vitrified Clay

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612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	4.6	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	24	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	4.5	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	58	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.2625	280.02	0.1	7.2	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	5.7	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	45.9	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	6.2	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	100	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	100	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	11	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	4.5	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	4.9	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	12.3	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	8.3	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	4.6	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	7.3	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	51.8	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	52	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	4.6	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.2625	343.6	0.1	42.2	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	7.3	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.2625	358.36	0.1	3.2	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	3.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	7	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	7.6	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	57.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	22.6	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	51.4	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.2625	429.13	0.1	3.2	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	3	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	3.2	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	2.6	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	24.9	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	12.3	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.0442	2376.2	0	5.3	PVC
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	3.1	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	10.5	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	2.9	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	2.5	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	8.4	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	3.2	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	1.9	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	1.9	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.2625	2474.3	0	13.9	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	5.5	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	4.6	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	9.8	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	3.7	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	3.2	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	12.5	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	100	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	7.7	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	0	0	266.59	0	50	Vitrified Clay
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	50	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	5.1	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	0	PVC

Model Gravity Sewer Data Table 25 Units Per Acre Build-Out
Exhibit E1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's n	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Depth/ Rise (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	(N/A)	PVC

EXHIBIT E.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
67	M17A9	8.5	8.5	16416	0	449.5	11.4	460.89	0.79	0.8	FALSE	TRUE
359	M3A1	6.4	6.4	8964	-1.8	356.9	6.225	363.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.7	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1914	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	660.9	0	660.86	1.73	-1.8	FALSE	TRUE
534	M14A3	5.9	5.9	0	-2.6	98.12	0	98.119	0.83	-1.8	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.12	1.995	98.119	1.28	-1.8	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.62	25.298	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.3125	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.888	2.8875	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.3	22.051	365.33	0.71	-1.2	FALSE	TRUE
1056	M17A1	8.6	8.6	41040	-7	795.7	28.5	824.17	0.71	-6.3	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1080	M17A10	8.7	8.7	6156	0.6	430.3	4.275	434.53	1.25	1.8	FALSE	TRUE
1087	M17A11	8.9	8.9	32832	1.6	365.4	22.8	388.21	1.52	3.1	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	5.38	4.9	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.5	17.1	159.55	4.66	5.1	TRUE	TRUE
1101	M14D2	4.9	4.9	16416	1.3	131.1	11.4	142.45	3.67	4.9	TRUE	TRUE
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	2.93	5.1	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94	11.4	105.4	2.34	5.1	FALSE	TRUE
1107	M14C4	6.2	6.2	185132.02	-1.4	302.1	128.56	430.62	5.35	4	FALSE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	430.6	20.52	451.14	4.31	2	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	451.1	0	451.14	4.23	1.8	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	562.7	0	562.74	3.87	1.2	FALSE	TRUE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	1.66	5.1	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	4.59	5.1	FALSE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	4.18	5.2	FALSE	TRUE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	3.41	5.2	FALSE	TRUE
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	2.66	5.2	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.39	4.7817	76.174	1.41	-0.2	FALSE	TRUE
1284	M22A5	5.4	5.4	122526	2.2	0	85.088	85.088	0.21	2.4	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	3.89	5.2	FALSE	TRUE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	3.44	5.2	FALSE	TRUE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	2.62	5.2	FALSE	TRUE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	2.08	5.2	FALSE	TRUE
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	2.74	5.2	FALSE	TRUE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	1.92	5.2	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.078	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.0442	1.0442	0.02	5	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1393	M17B1	8.8	8.8	0	2.2	173.1	0	173.14	0.91	3.1	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.5	2.3625	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.96	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634	11.159	645.2	0.78	-3.6	FALSE	TRUE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	1.99	4.9	FALSE	TRUE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	1.52	4.9	FALSE	TRUE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	1.15	4.9	FALSE	TRUE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.73	4.9	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.938	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.618	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.636	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.3168	3.3168	0.04	0	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.7375	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.3337	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.46667	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.688	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.625	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.29999	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.2625	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.2625	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE
4266	M37A5	5	5	1503.6	3	0	1.0442	1.0442	0.02	3	FALSE	TRUE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	2.17	5.2	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.9925	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.805	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	0.25	5.1	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
68	M17J1	8.8	8.8	16416	3.7	3.563	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.7125	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	196.9	7.695	204.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.125	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.3	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.19	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	162	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.6	14.381	694	0.53	-4.1	FALSE	FALSE
530	M14A1	6.3	6.3	0	-4	752.8	0	752.77	0.58	-3.4	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.93	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.53	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.73	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.13	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.7333	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.63	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.3125	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.313	8.3125	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.164	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.51	16.164	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.67	16.164	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.8	7.8517	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.308	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.457	9.4567	18.913	0.09	2.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
632	M36H1	8.8	8.8	11306.4	3	15.7	7.8517	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.852	7.8517	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.8517	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.34	16.164	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.4567	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.9	7.8517	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.6	53.098	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.8	35.034	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.33	10.741	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.22	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.74	10.741	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.741	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.369	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.8	0	29.802	0.15	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
674	M36B6	5.7	5.7	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.9	0	14.901	0.08	2.1	FALSE	FALSE
677	M36B3	6.4	8.3	3439.8	-0.1	70.8	2.3888	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.08	1.5225	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.034	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.07	10.741	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.8	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.9	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	505.9	0	505.93	0.45	-1.7	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.04	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.04	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.92	7.125	45.041	0.14	1.9	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
700	M17L4	7.6	7.6	16416	2.3	26.52	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.12	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.116	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	166.7	1.995	168.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	2.71	1.425	4.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	1.285	1.285	6.93	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	176.1	2.565	178.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.55	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.4	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.7917	3.7917	0.05	3.6	FALSE	FALSE
900	M23B1	5.4	5.4	56700	1.9	3.792	39.375	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.3333	2.3333	0.04	2.2	FALSE	FALSE
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	22.23	5.355	27.585	0.11	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	38.3	3.15	41.445	0.15	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	17.19	2.52	19.71	0.11	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	14.67	2.52	17.19	0.11	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	12.15	2.52	14.67	0.1	1.9	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
929	M5A8	6.3	6.3	4082.4	3.1	0.315	11.835	12.15	0.09	3.2	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.33	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.623	3.15	6.7725	0.06	3.1	FALSE	FALSE
966	M4G2	7.4	7.4	907.2	5.4	2.993	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.8375	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.8375	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.7	9.5618	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.413	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.263	2.8875	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.2625	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.2625	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.3	0	365.33	0.43	-1.6	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
999	M34A4	4.1	4.1	0	-3	365.3	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.0417	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	591.4	1.8895	593.32	0.73	-5.7	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	505.9	0	505.93	0.45	-3	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	718.7	0	718.72	0.75	-5.9	FALSE	FALSE
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.167	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.538	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.39	2.85	19.237	0.09	2.6	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1086	M17A12	9.4	9.4	131328	4	0	91.2	91.2	0.23	4.2	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.12	-1.8	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.58	5.415	88.999	0.64	-1.7	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.63	15.279	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.633	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.17	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.97	3.42	17.385	0.24	-0.2	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.51	1.425	27.93	0.13	0.5	FALSE	FALSE
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.96	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.713	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.7125	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.83	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	362.5	27.417	389.91	0.39	-1	FALSE	FALSE
1270	M22F1	4.7	4.7	0	-1.8	0	0	0	1.26	-0.5	FALSE	FALSE
1274	M22A2	4.8	4.8	20412	-0.8	348.3	14.175	362.49	0.53	-0.3	FALSE	FALSE
1276	M22B1	6.2	6.2	123832.8	1.2	0.945	85.995	86.94	0.2	1.4	FALSE	FALSE
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	244.4	17.01	261.37	0.37	1.3	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.03	0	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.53	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.08	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.08	0	88.078	0.1	1.6	FALSE	FALSE
1330	M40A4	7.5	7.5	0	2.7	88.08	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.978	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.2575	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	236	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.71	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.96	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.568	4.3062	8.8737	0.06	2.8	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1359	M16A8	6.1	6.1	0	3.5	4.568	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.788	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.7875	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.048	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.0475	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.66	1.0442	44.699	0.14	-0.3	FALSE	FALSE
1370	M37A3	5.4	5.4	4510.8	-1.6	44.7	3.1325	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.0883	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.76	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.309	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.0883	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.088	3.1325	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.0442	1.0442	0.02	-0.4	FALSE	FALSE
1395	M17B2	9	9	0	2.6	173.1	0	173.14	0.56	3.1	FALSE	FALSE
1397	M17B3	8	8	32832	3.4	150.3	22.8	173.14	0.29	3.7	FALSE	FALSE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	0.07	3.8	FALSE	FALSE
1401	M17B4	8.1	8.1	0	4	138.9	0	138.94	0.48	4.5	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	127.5	11.4	138.94	0.26	4.9	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.07	5	FALSE	FALSE
1407	M17B6	7.7	7.7	68742	5.6	68.4	47.737	116.14	0.23	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.27	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.042	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.74	0	59.743	0.17	-1	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1426	M32C1	5.7	5.7	0	0	13.81	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.07	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.54	8.5313	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.517	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.665	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.21	19.487	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.48	38.951	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.34	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.77	5.5708	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.7198	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.2625	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.1	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.1	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.088	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.5	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.83	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.25	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.9	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.32	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.4	8.0208	34.417	0.11	-0.9	FALSE	FALSE
1521	M34C2	7.1	7.1	0	-0.3	26.4	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.6	3.7917	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.6042	22.604	0.1	3	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.21	5.5903	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.43	0	10.427	0.07	2.3	FALSE	FALSE
1536	M34B3	5.7	5.7	2520	2.9	8.677	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.58	7.0972	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.5799	1.5799	0.03	4.3	FALSE	FALSE
1550	M17F1	9.1	9.1	32832	2.8	78.28	22.8	101.08	0.39	3.2	FALSE	FALSE
1552	M17F2	8.9	8.9	0	3.9	78.28	0	78.277	0.22	4.1	FALSE	FALSE
1554	M17F3	10.9	10.9	70178.4	4	29.54	48.735	78.277	0.19	4.2	FALSE	FALSE
1556	M17F4	10	10	42540	5.2	0	29.542	29.542	0.14	5.4	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.05	2.8583	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.18	5.7167	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.48	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.38	8.0938	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.554	16.908	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.5542	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.71	31.208	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.0769	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.077	6.0769	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.87	6.0769	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.12	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE
1695	M38A5	4.9	4.9	18901.68	-2.1	19.95	13.126	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.07	13.126	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.2	13.126	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.3	27.065	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.94	27.065	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.3	13.952	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.24	13.618	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.62	13.618	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.3	10.733	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.829	3.4708	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.2417	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.242	8.0792	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.8292	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.72	10.047	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	23	1.26	24.255	0.09	-1.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3102	M34G1	5.2	5.2	68390	3.8	0	47.493	47.493	0.16	4	FALSE	FALSE
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.878	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.2625	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.2625	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.888	2.8875	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.33	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.59	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.84	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.47	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.98	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.11	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.5	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.46	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.35	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.032	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.8	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.01	6.8779	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.83	17.181	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.432	34.432	0.13	2.1	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3642	M18A-A1	5.1	5.1	0	-1	76	0	76.004	0.17	-0.8	FALSE	FALSE
3682	M22A4	5.5	5.5	0	1.6	244.4	0	244.36	0.43	2	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.334	4.9963	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.467	2.0125	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.94	49.613	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.63	23.625	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	43.97	2.205	46.17	0.16	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.37	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE

Model Manhole Data Table 25 Unit Per Acre Build-Out
Exhibit E2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.89999	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.263	2.3625	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.13	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.86	10.125	102.99	0.24	0.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	505.9	0	505.93	0.68	-5.7	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	505.9	0	505.93	0.6	-5.1	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.66	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.29	12.242	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT E.3
FORCEMAIN DATA TABLE REPORT

Model Forcemain Data Table 25 Units Per Acre Build-Out
Exhibit E3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

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3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

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3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB	PMP-18A-B	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

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3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

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3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

Model Forcemain Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
1791	O2L26FB1	W-26	PMP-26B	Natural stream we	0.1	7.7	20	0.045	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

Model Forcemain Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
435	O2L18A-FA	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
436	O2L18A-FA	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)

Model Forcemain Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	######	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)

Model Forcemain Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3651	O2L34BYEF	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)

Model Forcemain Data Table 25 Units Per Acre Build-Out
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ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	######	(N/A)

EXHIBIT E.4
PRESSURE NODE DATE TABLE REPORT

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE

Model Pressure Node Data Table 25 Units Per Acre
Exhibit E4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE
1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT E.5
PUMP DATA TABLE REPORT

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9
64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2

Model Pump Data Table 25 Units Per Acre Build-Out
Exhibit E5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
482	PMP4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT E.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 25 Units Per Acre
Exhibit E6

ID	Label	Elevation (Ground) (ft)	Elev (Invert) (ft)	Boundary Condition Type	Elevation (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1020	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3724	Measured 10 psi or 23 feet of Head on Monday 6/12/2023

EXHIBIT F.1
GRAVITY SEWER DATA TABLE REPORT

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1120	O1L14SC1	M14C1	-2.7	M14A2	-3.6	279.4	0.003	8	0.013	4.39	687.4	302.61	227.2	Vitrified Clay
536	O1L14SA2	M14A2	-3.6	M14A1	-4	102.8	0.004	8	0.013	5.01	785.6	346.58	226.7	Vitrified Clay
1115	O1L14SC2	M14C2	-2.4	M14C1	-2.7	92.4	0.003	8	0.013	3.68	575.8	298.52	192.9	Vitrified Clay
1113	O1L14SC3	M14C3	-2.3	M14C2	-2.4	22.4	0.003	8	0.013	3.68	575.8	303.48	189.7	Vitrified Clay
1110	O1L14SC4	M14C4	-1.4	M14C3	-2.3	315.6	0.003	8	0.013	3.54	555.3	297.54	186.6	Vitrified Clay
1322	O1L17SA10	M17A10	0.6	M17A9	0	160.9	0.004	8	0.013	3.43	537.1	325.59	165	Vitrified Clay
1466	O2L34SA9	M34A9	0.1	M34A8	0	92.2	0.001	8	0.013	1.39	217.9	138.37	157.5	Vitrified Clay
1323	O1L17SA9	M17A9	0	M17A8	-0.4	88.8	0.005	8	0.013	3.6	563.5	364.07	154.8	Vitrified Clay
1517	O2L34SA3	M34A3	-4.4	M34A2	-4.5	34	0.004	8	0.01	4.12	645.2	418.76	154.1	PVC
998	O2L34SA6	M34A6	-1.9	M34A5	-2.1	77	0.002	8	0.013	2.33	365.3	247.26	147.8	Vitrified Clay
1089	O1L17SA11	M17A11	1.6	M17A10	0.6	245.1	0.004	8	0.013	3.13	490.8	342.94	143.1	Vitrified Clay
1275	O2L22SA2	M22A2	-0.8	M22A1	-1.4	133.8	0.005	8	0.013	2.94	460.5	372.16	123.7	Vitrified Clay
1353	O2L34SA8	M34A8	0	M34A7	-0.5	319.7	0.002	8	0.013	1.62	239.6	224.95	106.5	Vitrified Clay
1057	O1L17SA2	M17A2	-6.6	M17A1	-7	144.5	0.002	12	0.013	2.48	821.3	775.54	105.9	Vitrified Clay
4001	O1L17SA1	M17A1	-7	W-17	-7.1	39.9	0.003	12	0.013	2.95	926.8	912.44	101.6	Vitrified Clay
1108	O1L14SC5	M14C5	-0.4	M14C4	-1.4	315.1	0.003	8	0.013	1.93	302.1	297.81	101.4	Vitrified Clay
1032	O1L17SA3	M17A3	-6.4	M17A2	-6.6	112	0.002	12	0.013	2.24	695.9	692.29	100.5	Vitrified Clay
360	O2L3SA1	M3A1	-1.8	W-3	-1.7	17.9	-0.004	8	0.013	2.31	362.1	362.33	99.9	
3683	O2L22SA4	M22A3	0.9	M22A4	1.6	180.6	0.004	8	0.013	2.39	326.5	327.87	99.6	Vitrified Clay
3510	O2L35SA1	W-35	-1.4	M35A1	-1.3	20.3	0.005	8	0.01	3.58	452.8	494.45	91.6	PVC
4285	O1L17SA4	M17A5	-5.7	M17A4	-6.3	285.4	0.002	12	0.013	2.37	608.5	751.26	81	Vitrified Clay
1518	O2L34SA3	M34A4	-3	M34A3	-4.3	313	0.004	8	0.01	3.22	365.3	454.36	80.4	PVC
1283	O2L22SA3	M22A3	0.9	M22A2	-0.8	259.4	0.007	8	0.013	3.12	343.5	442.87	77.6	
988	O2L34SI1	M34A7	-0.5	M34A6	-1.9	332.4	0.004	8	0.013	2.43	255.2	349.46	73	Vitrified Clay
1465	O2L34SA10	M34A10	0.8	M34A9	0.1	233.6	0.003	8	0.013	2.06	213.7	296.91	72	Vitrified Clay
4282	O1L17SA4	M17A4	-6.3	M17A3	-6.4	27.9	0.003	12	0.013	2.64	608.5	856.88	71	Vitrified Clay
1459	O2L34SA11	M34A11	1.5	M34A10	0.8	233.9	0.003	8	0.013	2.12	213.1	307.09	69.4	Vitrified Clay
3993	O2L36SB1	M36A1	-5.2	M36B1	-4	279.6	0.004	8	0.01	3	263.9	452.17	58.4	PVC
4142	O2L1SA5	M1A4	1	M1A5	1.1	43.1	0.004	8	0.013	2.25	193.2	342.52	56.4	Vitrified Clay
4143	O2L1SA6	M1A5	1.1	M1A6	1.4	72.8	0.004	8	0.013	2.25	192.3	343.57	56	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
376	O2L3SA2	M3A2	-1.3	M3A1	-1.8	107.4	0.005	8	0.013	2.42	203.6	370.12	55	Vitrified Clay
4081	O2L1SA4	M1A3	-0.1	M1A4	1	240.7	0.004	8	0.013	2.35	196.2	359.94	54.5	Vitrified Clay
733	O2L3SH1	M3H1	-0.1	M3A2	-1.3	318.9	0.004	8	0.013	2.14	177.6	329.9	53.8	Vitrified Clay
1100	O1L14SD1	M14D1	0.4	M14C5	-0.4	279.3	0.003	8	0.013	1.02	159.6	299.18	53.3	Vitrified Clay
646	O2L36SA4	M36A4	-2.2	M36A3	-2.4	220.4	0.001	8	0.01	1.38	112.7	212.41	53.1	PVC
737	O2L3SH2	M3H2	1.3	M3H1	-0.1	388.5	0.004	8	0.013	2.08	167.7	322.05	52.1	Vitrified Clay
1402	O1L17SB4	M17B3	3.6	M17B4	4.2	217.7	0.003	8	0.01	1.12	176	370.1	47.6	PVC
1396	O1L17SB2	M17B1	2.2	M17B2	2.6	99.6	0.004	8	0.01	1.34	210.2	446.82	47	PVC
4136	O2L1SA7	M1A6	1.4	M1A7	1.7	46.6	0.006	8	0.013	2.65	191.4	426.48	44.9	Vitrified Clay
3684	O2L22SA4	M22A4	1.6	M22A5	2.2	112.5	0.005	8	0.013	2.38	167.2	386.07	43.3	
419	O2L2SA1	M2A1	-2.1	W-2	-2.2	15.7	0.004	6	0.013	1.64	64.5	150.5	42.9	Vitrified Clay
1324	O1L17SA8	M17A8	-2.1	M17A6	-3.4	159.5	0.008	12	0.013	3.92	608.5	1443.4	42.2	Vitrified Clay
3863	O2L3SF1	M3A1	-1.8	M3F1	-0.4	341.2	0.004	8	0.013	2.09	139.2	344.92	40.3	Vitrified Clay
870	O2L1SA2	M1A2	-0.8	M1A1	-1	82.6	0.003	10	0.013	2.16	225.2	558.68	40.3	Vitrified Clay
3957	O2L3SF3	M3F2	1.5	M3F3	3.2	459.3	0.004	8	0.013	1.99	132.9	329.96	40.3	Vitrified Clay
1168	O1L14SB2	M14B2	-1.4	M14B1	-1.7	285.5	0.001	8	0.013	1.16	76.63	192.58	39.8	Vitrified Clay
1398	O1L17SB3	M17B3	3.4	M17B2	2.6	147.7	0.006	8	0.01	1.34	210.2	538.07	39.1	PVC
1124	O1L14SC6	M14C6	0.5	M14C5	-0.4	305.7	0.003	8	0.013	0.75	116.9	299.16	39.1	Vitrified Clay
1404	O1L17SB5	M17B5	4.7	M17B4	4	146.5	0.004	8	0.01	2.72	176	454.91	38.7	PVC
1126	O1L14SC7	M14C7	1	M14C6	0.5	170	0.003	8	0.013	0.71	111.2	288.2	38.6	Vitrified Clay
1617	O2L3SF2	M3F2	1.5	M3F1	-0.4	437.2	0.004	8	0.013	2.13	136	357.52	38.1	Vitrified Clay
653	O2L36SA2	M36A2	-4.1	M36A1	-5.2	310.1	0.003	8	0.01	2.46	156.8	414.13	37.9	PVC
1271	O2L22SF1	M22F1	-1.8	M22A1	-0.5	112.4	-0.011	6	0.013	1.13	99.38	266.59	37.3	Vitrified Clay
1104	O1L14SD3	M14D3	2.1	M14D2	1.3	284.2	0.003	8	0.013	0.69	108.3	296.6	36.5	Vitrified Clay
1551	O1L17SF1	M17F1	2.8	M17A11	1.6	282.2	0.004	8	0.013	0.83	130.3	358.04	36.4	Vitrified Clay
1106	O1L14SD4	M14D4	2.8	M14D3	2.1	226.8	0.003	8	0.013	0.67	105.4	296.94	35.5	Vitrified Clay
4080	O2L2SR2	M1A2	-0.8	M1A3	-0.1	208.8	0.003	10	0.013	2.1	199.5	562.18	35.5	Vitrified Clay
1088	O1L17A12	M17A12	4	M17A11	3.1	217.3	0.004	8	0.013	0.81	127.5	362.32	35.2	Vitrified Clay
707	O2L3SJ1	M3J1	3	M3H2	1.3	234.4	0.007	8	0.013	2.71	162.5	465.9	34.9	Vitrified Clay
1408	O1L17SB6	M17B6	5.6	M17B5	4.7	229.2	0.004	8	0.01	2.58	153.2	444.28	34.5	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1000	O2L34SA5	M34A5	-2.1	M34A4	-3	23.2	0.039	8	0.013	6.17	365.3	1067.6	34.2	Vitrified Clay
902	O2L23SB1	M23B1	1.9	M17A1	0.3	399.2	0.004	8	0.035	0.74	43.17	128.33	33.6	
1553	O1L17SF2	M17F2	3.9	M17F1	2.8	296.1	0.004	8	0.013	0.69	107.5	335.02	32.1	Vitrified Clay
651	O2L36SA3	M36A3	-2.4	M36A2	-4.1	354.7	0.005	8	0.01	2.7	148.9	479.4	31.1	PVC
1710	O2L38SA2	M38A2	-7.2	M38A1	-8.8	395.9	0.004	8	0.01	2.47	127.4	449.63	28.3	PVC
3884	O2L38SA1	M38A1	-8.9	W-38	-9.1	23.9	0.008	8	0.01	3.53	182.2	644.52	28.3	PVC
4284	O1L17SA6	M17A6	-3.4	M17A5	-5.7	118.8	0.019	12	0.013	5.39	608.5	2230.1	27.3	Vitrified Clay
683	O2L36SB2	M36B2	-3	M36B1	-4	327.4	0.003	8	0.01	2.16	108.2	397.39	27.2	PVC
3372	O2L7SC2	M7C2	-0.1	M7C1	-0.9	162.5	0.005	8	0.013	2.06	103	380.57	27.1	Vitrified Clay
1102	O1L14SD2	M14D2	3.2	M14D1	0.4	281.8	0.01	8	0.013	0.91	142.5	533.77	26.7	Vitrified Clay
1156	O1L14SA5	M14A5	-2.4	M14A4	-3.1	172.3	0.004	8	0.013	0.57	89	343.16	25.9	Vitrified Clay
1555	O1L17SF3	M17F3	4	M17F2	3.9	16.5	0.006	8	0.013	0.69	107.5	421.82	25.5	Vitrified Clay
645	O2L36SA5	M36A5	-2	M36A4	-2.2	84.2	0.003	8	0.01	2.2	104.8	413.76	25.3	PVC
404	O2L1SA1	M1A1	-1	W-1	-1.2	11	0.012	10	0.013	3.65	270.5	1071.6	25.2	Vitrified Clay
4010	O2L19SA1	W-9	-0.4	M9A1	-0.3	20.8	0.005	8	0.01	2.56	116.6	488.56	23.9	PVC
524	O2L34SA2	M34A2	-4.6	M34A1	-5.5	25.8	0.031	12	0.012	6.98	694	3033.5	22.9	Ductile Iron
589	O2L7SA2	M7A2	-2	M7A1	-5.5	246.6	0.014	6	0.013	2.76	68.03	300.43	22.6	Vitrified Clay
3378	O2L7SC3	M7C3	0.7	M7C2	-0.1	139.7	0.006	8	0.013	2.1	91.36	410.39	22.3	Vitrified Clay
644	O2L36SA6	M36A6	-1.7	M36A5	-2	90.5	0.003	8	0.01	2.05	88.67	399.19	22.2	PVC
569	O2L7SD2	M7D2	1.8	M7D1	1	157	0.005	6	0.013	1.66	39.53	184.22	21.5	Vitrified Clay
457	O2L7SA1	M7A1	-5.5	W-7	-6.4	7.7	0.116	6	0.013	2.08	183.3	857.64	21.4	
570	O2L7SD1	M7D1	1	M7A3	-0.6	136.4	0.012	6	0.013	2.43	56.33	272.74	20.7	Vitrified Clay
3512	O2L35SA2	M35A1	-1.2	M35A2	-0.1	286.5	0.004	8	0.01	2.19	89.89	436.87	20.6	PVC
1333	O1L40SA5	M40A4	2.7	M40A5	3.7	263.3	0.004	8	0.01	2.17	88.08	434.47	20.3	PVC
1329	O1L40SA3	M40A2	0.3	M40A3	1.4	286.8	0.004	8	0.01	2.18	88.08	436.66	20.2	PVC
3103	O2L34SG1	M34G1	3.8	M34F2	0.3	401.3	0.009	6	0.013	2.09	47.49	236.19	20.1	Vitrified Clay
3514	O2L35SA3	M35A2	0	M35A3	1.5	393.5	0.004	8	0.01	2.13	83.01	433.85	19.1	PVC
1016	O1L17SM1	M17M1	-0.8	M17A3	-1.3	132	0.004	8	0.01	2.21	85.5	450.98	19	PVC
1331	O1L40SA4	M40A3	1.5	M40A4	2.7	275	0.004	8	0.01	2.28	88.08	465.75	18.9	PVC
1327	O1L40SA2	M40A1	-0.6	M40A2	0.2	190.5	0.004	8	0.01	2.29	88.08	468.18	18.8	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4128	O2L1SA8	M1A7	1.7	M1A8	1.9	44.8	0.004	12	0.013	2.19	187.8	1007.9	18.6	
1557	O1L17SF4	M17F4	5.2	M17F3	4	350.6	0.003	8	0.013	1.55	58.75	317.28	18.5	Vitrified Clay
643	O2L36SA7	M36A7	-0.7	M36A6	-1.7	299.2	0.003	8	0.01	1.92	72.51	395.17	18.3	PVC
4129	O2L1SA9	M1A8	1.9	M1A9	3	256.4	0.004	12	0.013	2.26	186.3	1056.8	17.6	
1304	O1L14SC8	M14C8	1.3	M14C7	1	89.7	0.003	8	0.01	0.45	71.25	407.81	17.5	PVC
588	O2L7SA3	M7A3	-0.6	M7A2	-2	283.5	0.005	8	0.013	1.82	65.63	379.78	17.3	Vitrified Clay
3247	O2L18SC9	M18C9	3.4	M18C2	3	99.5	0.004	8	0.01	2.11	75.65	441.38	17.1	PVC
1502	O2L18ASA5	M18A-A5	0.7	M18A-A4	0.2	162.3	0.003	8	0.01	1.88	67.5	395.19	17.1	PVC
1496	O2L18ASA3	M18A-A3	-0.3	M18A-A2	-0.7	102.4	0.004	8	0.01	0.49	76	446.05	17	PVC
3713	O2L22SA1	M22A1	-1.4	W-23	-2.2	16.1	0.048	12	0.013	7.4	587.3	3518.3	16.7	
1704	O2L38SA3	M38A3	-5.5	M38A2	-7.2	382.4	0.004	8	0.013	1.69	59.32	358.4	16.6	
4023	O2L5SA1	M5A1	-2.9	W-5	-3	10.6	0.005	6	0.01	1.89	37.17	225.16	16.5	PVC
1306	O1L14SC9	M14C9	1.7	M14C8	1.3	115.8	0.004	8	0.01	0.45	71.25	444.4	16	PVC
538	O1L14SA4	M14A4	-3.1	M14A3	-2.6	57	-0.008	8	0.01	0.63	98.12	619.43	15.8	PVC
1412	O1L17SB7	M17B6	5.3	M17B7	5.7	143.6	0.003	8	0.01	1.69	57	362.66	15.7	PVC
537	O1L14SA3	M14A3	-2.6	M14A2	-3.6	68.4	0.013	8	0.013	0.63	98.12	628.94	15.6	
1500	O2L18ASA4	M18A-A4	0.2	M18A-A3	-0.3	112.6	0.004	8	0.01	2.07	69.07	445.71	15.5	PVC
1172	O1L14SA7	M14A7	-1.6	M14A6	-0.5	131	-0.008	8	0.013	0.49	76.17	492.39	15.5	Vitrified Clay
3995	O2L36SC2	M36C1	-2	M36C2	-0.5	271.5	0.005	8	0.01	2.41	80.07	522.31	15.3	PVC
1014	O1L17SM2	M17M2	-0.3	M17M1	-0.8	94.7	0.005	8	0.01	2.26	74.1	491.29	15.1	PVC
912	O2L5SA2	M5A2	-2.7	M5A1	-2.9	53.7	0.005	6	0.01	1.81	32.45	223.47	14.5	PVC
1012	O1L17SM3	M17M3	0.6	M17M2	-0.3	244	0.004	8	0.01	1.98	62.7	437.59	14.3	PVC
642	O2L36SA8	M36A8	0.2	M36A7	-0.7	292.1	0.003	8	0.01	1.8	56.34	399.96	14.1	PVC
1425	O2L32SA1	W-32	-1.6	M32A1	-1.2	120.4	0.004	8	0.01	1.95	59.74	435.71	13.7	PVC
1506	O2L18ASA6	M18A-A6	1.2	M18A-A5	0.7	121.8	0.004	8	0.01	2.04	61.2	460.67	13.3	PVC
3643	O2L18ASA2	M18A-A2	-0.7	M18A-A1	0.4	95.8	-0.011	8	0.013	0.49	76	575.97	13.2	
3846	O2L4SA3	M4A2	0.3	M4A3	0.7	92.3	0.005	6	0.013	1.34	22.37	171.88	13	Vitrified Clay
3365	O2L7SC1	M7C1	-0.9	M7A1	-5.5	181.5	0.025	8	0.013	3.77	109.6	864.45	12.7	Vitrified Clay
3994	O2L36SC1	M36B1	-4	M36C1	-2	190.4	0.011	8	0.01	3.16	90.81	724.35	12.5	PVC
3426	O2L36SA1	M36A1	-5.2	W-36	-9	68	0.057	12	0.013	7	473.7	3804.2	12.5	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
568	O2L7SD3	M7D3	2.7	M7D2	1.8	157.5	0.005	6	0.013	1.42	22.73	182.79	12.4	Vitrified Clay
1512	O2L18ASA8	M18A-A8	2.1	M18A-A7	1.7	100.8	0.004	8	0.01	1.95	54.9	449.6	12.2	PVC
1377	O1L37SC1	M37A2	-2.8	M37A1	-3.2	98.7	0.004	8	0.01	2.01	56.19	465.32	12.1	PVC
1510	O2L18ASA7	M18A-A7	1.7	M18A-A6	1.2	120	0.004	8	0.01	2	55.84	464.08	12	PVC
1008	O1L17SM5	M17M5	1.9	M17M4	1	215.3	0.004	8	0.01	1.88	51.3	440.44	11.6	PVC
1010	O1L17SM4	M17M4	1	M17M3	0.6	105.8	0.004	8	0.01	1.89	51.3	444.2	11.5	PVC
1448	O2L31SA2	M31A2	-2.3	M31A1	-4	387.1	0.004	8	0.01	1.98	53.69	465.86	11.5	PVC
1606	O1L17SO1	M17O1	1.7	M17N1	0.1	315.6	0.005	8	0.01	2.11	57	498.88	11.4	PVC
682	O2L36SB3	M36B3	-0.1	M36B2	-3	325.9	0.009	8	0.01	2.78	73.19	660.47	11.1	PVC
865	O2L1SE3	M1E3	1.5	M1E2	0.7	171.5	0.005	6	0.013	1.28	18.75	172.65	10.9	Vitrified Clay
1166	O1L14SB1	M14B1	-1.7	M14A1	-4	304.2	0.007	10	0.013	2.27	91.91	847.57	10.8	Vitrified Clay
1072	O1L17SQ1	M17Q2	-3.4	M17Q1	-4	143.7	0.004	8	0.013	0.24	37.05	344.55	10.8	Vitrified Clay
794	O2L2SA2	M2A2	-1.3	M2A1	-2.1	174.8	0.005	8	0.013	1.52	38.7	366.74	10.6	Vitrified Clay
4012	O2L9SB1	M9A1	-0.3	M9B1	0.5	194.7	0.004	8	0.01	1.87	47.25	452	10.5	PVC
1128	O1L14SF1	M14F1	1.8	M14C7	1	250.4	0.003	8	0.013	0.2	31.35	302.71	10.4	Vitrified Clay
1414	O1L17SB9	M17B9	6.5	M17B7	6.1	98.6	0.004	8	0.01	1.83	45.6	443.5	10.3	PVC
1702	O2L38SA4	M38A4	-3.8	M38A3	-5.4	393.5	0.004	8	0.01	1.86	46.2	452.36	10.2	PVC
699	O1L17SL3	M17L3	1.8	M17L2	1.2	152.2	0.004	8	0.01	1.83	45.04	448.12	10.1	PVC
697	O1L17SL2	M17L2	1.2	M17L1	0.9	75.7	0.004	8	0.01	1.84	45.04	451.18	10	PVC
1373	O1L37SA3	M37A3	-1.6	M37A2	-2.8	245.7	0.005	8	0.01	1.96	47.83	482.4	9.9	PVC
1394	O1L17SB1	M17B1	2.2	M17A11	1.6	20.6	0.03	10	0.01	0.86	210.2	2218.4	9.5	PVC
1592	O2L16SA5	M16A5	0.6	M16A4	-0.3	203.9	0.004	8	0.013	1.38	31.71	348.09	9.1	Vitrified Clay
986	O2L34SF1	M34F1	0.8	M34A6	-0.3	324.1	0.004	12	0.013	1.68	86	952.5	9	
1006	O1L17SM6	M17M6	2.5	M17M5	1.9	150.5	0.004	8	0.01	1.76	39.9	445.1	9	PVC
1371	O1L37SA4	M37A4	-0.4	M37A3	-1.6	236.2	0.005	8	0.01	1.98	44.7	500.45	8.9	PVC
4321	O2L18SC1	M18A1	-3.1	M18C1	2.5	150.6	0.037	8	0.013	4.1	92.03	1041.2	8.8	Vitrified Clay
1712	O2L38SB1	M38A1	-2.9	M38B1	-1.6	300.5	0.004	8	0.01	1.83	40.85	465.5	8.8	PVC
1277	O2L22SB1	M22B1	1.2	M22A2	-0.8	70.3	0.028	8	0.01	4.62	102.8	1177.4	8.7	PVC
689	O2L36SD2	M36D2	1.9	M36D1	1	353.5	0.004	8	0.013	1.34	29.8	343.01	8.7	
1196	O1L14SA8	M14A8	-0.6	M14A7	-1.6	247.4	0.004	8	0.013	1.34	29.64	342.71	8.6	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4475	O2L4SA2	M4A2	0.3	M4A1	0.1	16.8	0.011	6	0.013	1.81	22.37	260.6	8.6	Vitrified Clay
701	O1L17SL4	M17L4	2.3	M17L3	1.8	130.1	0.004	8	0.01	1.73	37.92	445.75	8.5	PVC
856	O2L1SJJ1	M1JJ1	1.7	M1D2	0.9	131.3	0.006	6	0.013	1.31	15.9	191.56	8.3	Vitrified Clay
1586	O2L16SA3	M16A3	-1.4	M16A2	-2.6	24.9	0.045	8	0.013	4.44	95.48	1150.3	8.3	Vitrified Clay
680	O2L36SI1	M36I1	1.5	M36B3	-0.1	300.2	0.005	8	0.01	1.99	42.6	514.71	8.3	PVC
1170	O1L14SA6	M14A6	-0.5	M14A5	-2.4	64.2	0.029	8	0.013	3.56	76.17	923.17	8.3	Vitrified Clay
659	O2L36SC3	M36C3	3.9	M36C2	-0.5	309.8	0.014	8	0.01	3.24	69.33	843.1	8.2	PVC
3278	O2L18SC2	M18C2	3	M18C1	2.5	140.1	0.004	12	0.013	1.75	83.84	1019.8	8.2	
3429	O2L25SA2	M25A2	-0.4	M25A1	-1	132.9	0.004	8	0.013	1.37	29.1	355.25	8.2	Vitrified Clay
1198	O1L14SA9	M14A9	0.4	M14A8	-0.6	249.5	0.004	8	0.013	1.31	27.93	342.65	8.2	Vitrified Clay
4014	O2L9SB2	M9B1	0.5	M9B2	1.5	123	0.008	6	0.01	2.01	23.63	295.15	8	PVC
953	O2L4SA4	M4A4	1.2	M4A3	0.7	103.7	0.005	6	0.013	1.15	13.55	169.51	8	Vitrified Clay
1228	O1L14SA10	M14A10	1.2	M14A9	0.4	205.2	0.004	8	0.013	1.3	26.22	342.81	7.6	
1031	O1L17SN1	M17N1	0.1	M17A2	-1.9	188.1	0.011	12	0.013	2.77	125.4	1652.8	7.6	
532	O1L14SA1	M14A1	-4	W-14	-8.2	6.8	1.403	10	0.013	26.73	877.5	11649	7.5	
1319	O1L17SQ4	M17Q4	4.1	M17Q3	3.3	199.6	0.004	8	0.013	1.29	25.65	343.31	7.5	Vitrified Clay
1582	O2L16SB2	M16B2	-1.7	M16B1	-2	109.3	0.003	8	0.013	1.16	22.9	311.19	7.4	Vitrified Clay
1698	O2L38SA5	M38A4	-3.7	M38A5	-2.1	397.1	0.004	8	0.01	1.68	33.07	450.33	7.3	PVC
1431	O2L32SB2	M32A2	0.8	M32A1	-1.2	242.9	0.008	8	0.01	2.34	45.94	630.08	7.3	PVC
3083	O2L16SA1	M16A1	-2.8	W-16	-7.3	31.2	0.145	8	0.013	7	149	2064.8	7.2	Vitrified Clay
1605	O1L17SO2	M17O2	2.9	M17O1	1.7	258.3	0.005	8	0.01	1.76	34.2	476.53	7.2	PVC
3516	O2L35SD1	M35A3	1.5	M35D1	2	109.8	0.005	8	0.01	1.78	34.43	480.46	7.2	PVC
4096	O2L1SA10	M1A9	3	M1A10	4.3	221.4	0.006	8	0.013	1.51	28.75	410.73	7	Vitrified Clay
1718	O2L16SA2	M16A2	-2.6	M16A1	-2.8	25.6	0.007	12	0.013	2.24	95.48	1378.3	6.9	
692	O2L36SB4	M36B4	0.5	M36B3	-0.1	188.5	0.003	8	0.01	1.5	28.2	410.79	6.9	PVC
863	O2L1SK2	M1E4	3	M1E3	1.5	125.9	0.012	6	0.013	1.78	18.75	274.92	6.8	Vitrified Clay
4273	O2L32SC2	M32C1	0	M32C2	1	151.6	0.007	6	0.013	1.32	13.81	204.55	6.7	Vitrified Clay
1130	O1L14SF2	M14F2	2.5	M14F1	1.8	250.2	0.003	8	0.013	0.13	19.95	296.94	6.7	Vitrified Clay
3990	O2L35SA4	M35A3	1.5	M35A4	2.7	270.8	0.004	8	0.01	1.7	31.4	469.34	6.7	PVC
667	O2L36SG1	M36G1	5	M36C3	3.9	232.8	0.005	8	0.013	1.34	24.74	371.09	6.7	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1588	O2L16SD1	M16D1	-0.1	M16A3	-1.4	285.7	0.005	8	0.013	1.34	24.46	371.41	6.6	Vitrified Clay
1433	O2L32SA3	M32A2	0.8	M32A3	1.1	73.4	0.005	8	0.01	1.78	31.07	500.5	6.2	PVC
793	O2L2SD1	M2D1	-1.7	M2A1	-2.1	55.3	0.007	6	0.013	1.31	12.9	207.87	6.2	Vitrified Clay
796	O2L2SC1	M2C1	-1.8	M2A1	-2.1	40	0.007	6	0.013	1.28	12.6	203.11	6.2	Vitrified Clay
1356	O2L16SA6	M16A6	1.1	M16A5	0.6	98.2	0.005	8	0.01	1.82	31.71	512.97	6.2	PVC
1477	O2L39SA1	W-39	-2	M39A1	-1.6	76	0.005	8	0.01	0.2	31.5	511.59	6.2	PVC
1418	O1L17SB10	M17B10	7	M17B9	6.5	112.2	0.004	8	0.012	1.32	22.8	372.14	6.1	Ductile Iron
869	O2L1SE1	M1E1	-0.3	M1A2	-0.8	104.8	0.005	8	0.013	1.35	23.25	382.92	6.1	Vitrified Clay
867	O2L1SE2	M1E2	0.7	M1E1	-0.3	210.7	0.004	8	0.013	1.27	21.45	363.06	5.9	Vitrified Clay
4182	O2L7SB2	M1D1	-0.2	M1A1	-1	175.9	0.005	8	0.013	1.28	21.6	366.44	5.9	Vitrified Clay
1444	O2L31SA3	M31A3	-0.1	M31A2	-2.3	325.9	0.007	8	0.01	2.03	34.21	581.9	5.9	PVC
1442	O2L31SA4	M31A4	0.4	M31A3	-0.1	326.6	0.001	8	0.01	0.92	15.54	264.6	5.9	PVC
703	O1L17SL5	M17L5	3.6	M17L4	2.3	301.8	0.004	8	0.01	1.59	26.52	455.56	5.8	PVC
3198	O2L18SA1	W-18	-5.2	M18A1	-3.1	11.3	0.186	8	0.013	0.86	134.6	2339.4	5.8	Vitrified Clay
924	O2L5SA4	M5A4	-0.7	M5A3	-2.4	308.2	0.005	6	0.013	1.15	10.71	186.47	5.7	Vitrified Clay
528	O2L34SA1	M34A1	-5.5	W-34	-11.1	5.9	1.877	14	0.012	37.83	1914	34448	5.6	Ductile Iron
1522	O2L34SC2	M34C2	-0.3	M34C1	-1	152.4	0.005	8	0.01	1.64	26.4	480.62	5.5	PVC
4181	O2L7SB2	M1D2	0.9	M1D1	-0.2	268.1	0.004	8	0.013	1.22	19.5	358.58	5.4	Vitrified Clay
3187	O2L30SE1	M30B2	0	M30B1	-0.5	58.1	0.009	6	0.013	1.41	12.6	233.56	5.4	Vitrified Clay
976	O2L34SF2	M34F2	1.9	M34F1	-0.8	304.3	0.009	12	0.013	2.23	78.92	1480.9	5.3	
3193	O2L30SB4	M30B4	1.7	M30B3	1	143.5	0.005	4	0.01	1.05	4.095	77.556	5.3	PVC
1351	O2L34SL	M34L1	1.6	M34A8	0	389.1	0.004	8	0.013	1.16	18.06	343.39	5.3	Vitrified Clay
1714	O2L38SB3	M38B1	-1.6	M38B2	0.1	298.2	0.006	8	0.01	1.77	27.24	527.58	5.2	PVC
4002	O1L17SQ0	M17Q0	0.6	W-17	-0.1	26.7	0.027	8	0.01	3.86	59.22	1150	5.1	PVC
1083	O1L17SG1	M17G1	4.8	M17A10	4.1	172.1	0.004	8	0.01	1.49	22.8	446.44	5.1	PVC
1174	O1L14SM1	M14M1	-0.4	M14A7	-1.6	293.9	0.004	8	0.013	1.15	17.39	343.06	5.1	Vitrified Clay
1593	O2L16SA4	M16A4	-0.3	M16A3	-1.4	188.8	0.006	12	0.013	1.85	62.92	1253.3	5	
848	O2L1SJJ2	M1JJ2	2.1	M1JJ1	1.7	66.2	0.007	6	0.013	1.21	10.2	203.87	5	Vitrified Clay
1563	O1L14SH2	M14H2	3.4	M14H1	3	117.6	0.004	8	0.013	0.11	17.1	342.84	5	Vitrified Clay
859	O2L1SB1	M1A1	-1	M1B1	-0.4	124.3	0.005	8	0.013	1.24	18.6	375.29	5	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1321	O1L17SQ3	M17Q3	3.3	M17Q2	-3.4	341	0.02	8	0.013	2.51	37.05	759.03	4.9	Vitrified Clay
4020	O2L5SD2	M5D1	-1	M5D2	-0.8	43.7	0.005	6	0.01	1.3	10.71	221.39	4.8	PVC
926	O2L5SA6	M5A6	0.5	M5A4	-0.7	280.1	0.005	6	0.013	0.99	8.19	169.58	4.8	Vitrified Clay
1055	O1L17ST2	M17T2	-3.3	M17T1	-3.5	39.8	0.004	12	0.013	1.48	48.45	1013.6	4.8	
1021	O1L17SO3	M17O3	4.1	M17O2	2.9	270.1	0.005	8	0.01	1.57	22.8	477.74	4.8	PVC
1450	O2L31SB3	M31B2	0.8	M31B1	-0.4	235.1	0.005	8	0.01	1.61	23.34	493.11	4.7	PVC
4021	O2L5SD3	M5D2	-0.8	M5D3	0.7	341.9	0.005	6	0.013	0.98	7.875	169	4.7	Vitrified Clay
3657	O2L31SB1	M31A1	-4	W-31	-9.6	36.6	0.153	8	0.01	8.32	125.4	2756.8	4.5	PVC
1208	O1L14SS2	M14S2	2.1	M14S1	1	288.3	0.004	8	0.013	1.05	14.82	325.73	4.5	Vitrified Clay
3992	O2L35SA5	M35A4	2.8	M35A4	3.6	218.5	0.004	8	0.01	1.36	19.14	423.99	4.5	PVC
1312	O1L14SG1	M14G1	2.4	M14C9	1.7	177.5	0.004	8	0.01	0.13	19.95	442.78	4.5	PVC
1696	O2L38SA5	M38A6	-1.1	M38A5	-2	224.6	0.004	8	0.01	1.45	19.95	451.2	4.4	PVC
1613	O2L3SD1	M3D1	-0.2	M3A1	-1.8	527	0.003	8	0.013	0.96	13.11	296.95	4.4	Vitrified Clay
1776	O2L30SA4	M30A4	1.4	M30A3	0.6	183.3	0.005	6	0.013	0.98	7.56	171.47	4.4	Vitrified Clay
3476	O1L40SA1	M40A1	-0.6	W-40	-1.5	10.6	0.085	8	0.01	6.6	90.53	2054.1	4.4	PVC
1202	O1L14SS1	M14S1	1	M14A7	-1.6	247.7	0.011	8	0.013	1.78	24.37	556.67	4.4	Vitrified Clay
732	O2L3SL1	M3L1	0.4	M3H1	-0.1	113.6	0.005	6	0.013	0.97	7.41	170.35	4.3	Vitrified Clay
661	O2L36SC4	M36C4	5.1	M36C3	3.9	227.5	0.005	8	0.01	1.58	21.48	494.65	4.3	PVC
4064	O2L2SP1	M2P1	0	M2A2	-1.3	292.9	0.004	8	0.013	1.14	15.3	357.43	4.3	Vitrified Clay
1053	O1L17ST3	M17T3	-2.8	M17T2	-3.3	99.7	0.005	12	0.013	1.6	48.45	1132.6	4.3	
576	O2L7SE1	M7E1	4.9	M7D3	2.7	432.8	0.005	6	0.013	1.02	7.733	181.57	4.3	Vitrified Clay
4218	O2L25SA3	M25A2	-0.4	M25A3	0.2	107.7	0.006	8	0.013	1.29	17.13	404.83	4.2	Vitrified Clay
963	O2L4SA5	M4A5	1.8	M4A4	1.2	122.9	0.005	6	0.013	0.97	7.245	171.5	4.2	Vitrified Clay
3192	O2L30SF1	M30B3	1	M30B2	0	167.7	0.006	6	0.013	1.1	8.19	194.44	4.2	Vitrified Clay
137	O1L17SJ1	M17J1	3.7	M17A9	2.6	254	0.004	8	0.013	1.13	14.96	356.87	4.2	
1567	O1L14SH4	M14H4	4.2	M14H3	3.8	105.9	0.004	8	0.013	0.09	14.25	341.52	4.2	Vitrified Clay
3175	O2L30SA2	M30B1	-0.5	M30A1	-0.9	23.9	0.018	6	0.013	1.85	13.55	333.55	4.1	Vitrified Clay
1706	O2L38SC1	M38A2	-2	M38C1	-0.7	296.3	0.004	12	0.013	1.42	41	1030.2	4	
911	O2L5SA3	M5A3	-2.4	M5A2	-2.7	54.7	0.005	8	0.01	1.47	18.59	476.76	3.9	PVC
860	O2L1SB2	M1B1	-0.4	M1B2	1.2	373.3	0.004	8	0.013	1.09	13.8	354.63	3.9	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1612	O2L3SD2	M3D2	0.6	M3D1	-0.2	284.2	0.003	8	0.013	0.89	11.12	287.73	3.9	Vitrified Clay
735	O2L3SA3	M3A3	0.4	M3A2	-1.3	474.8	0.004	8	0.013	0.99	12.26	321.66	3.8	Vitrified Clay
1565	O1L14SH3	M14H3	3.8	M14H2	3.4	53.6	0.007	8	0.013	0.11	17.1	450.68	3.8	Vitrified Clay
1447	O2L31SB1	M31B1	-0.4	M31A1	-4	231.3	0.015	8	0.01	2.67	32.79	875.9	3.7	PVC
1025	O1L17SN2	M17N2	3.7	M17N1	0.1	202.6	0.018	8	0.01	2.84	34.2	935.91	3.7	PVC
1481	O2L39SA2	M39A1	-1.6	M39A2	-0.3	346.5	0.004	8	0.01	0.1	15.75	440.09	3.6	PVC
1435	O2L32SA4	M32A4	1.9	M32A3	1.1	179	0.004	8	0.01	1.4	16.52	465.42	3.5	PVC
3121	O2L29SB1	M29B1	-1	M29A1	-1.6	116	0.005	6	0.01	1.24	8.19	231.48	3.5	PVC
1749	O2L31SB3	M31B3	1.7	M31B2	0.8	175	0.005	8	0.01	1.52	17.77	505.55	3.5	PVC
4451	O2L18SB1	M18A1	-3.1	M18B1	-2.4	108	0.007	8	0.013	0.1	15.44	439.69	3.5	Vitrified Clay
1081	O1L17SH1	M17H1	2.6	M17A10	2.3	40.6	0.006	8	0.01	1.65	19.24	553.53	3.5	PVC
676	O2L36SB6	M36B6	3	M36B5	2.1	238.2	0.004	8	0.01	1.31	14.9	442.9	3.4	PVC
928	O2L5SA7	M5A7	1.8	M5A6	0.5	282.1	0.005	6	0.013	0.89	5.67	169.64	3.3	Vitrified Clay
1210	O1L14SS3	M14S3	2.9	M14S2	2.1	210.9	0.004	8	0.013	0.99	11.12	334.02	3.3	Vitrified Clay
705	O1L17SL6	M17L6	4	M17L5	3.6	88.8	0.004	8	0.01	1.35	15.12	456.92	3.3	PVC
742	O2L3SA4	M3A4	1.4	M3A3	0.4	285.6	0.004	8	0.013	0.94	10.55	320.92	3.3	Vitrified Clay
1070	O1L17SQ1	M17Q1	-4	M17Q0	0.6	105.3	-0.043	8	0.013	0.24	37.05	1128.7	3.3	Vitrified Clay
1716	O2L38SB3	M38B2	0.1	M38B3	1.5	395.4	0.003	8	0.01	1.22	13.62	416.54	3.3	PVC
786	O2L2SD3	M2D3	1.5	M2D2	0	255.5	0.006	6	0.013	1.01	6.3	192.96	3.3	Vitrified Clay
3384	O2L25SB2	M25B2	0.9	M25B1	0.3	267.7	0.002	8	0.013	0.79	8.76	269.31	3.3	Vitrified Clay
1079	O1L17SH2	M17H2	3	M17H1	2.6	95.1	0.005	8	0.01	1.48	16.39	506.06	3.2	PVC
1308	O1L14SG1	M14C10	2.6	M14C9	1.7	204.6	0.004	8	0.01	0.09	14.25	446.3	3.2	PVC
691	O2L36SB5	M36B5	2.1	M36B4	0.5	346.3	0.004	8	0.01	1.36	14.9	467.13	3.2	PVC
610	O2L2SA4	M2A4	1.5	M2A3	0.3	385.4	0.003	8	0.013	0.88	9.6	302.61	3.2	Vitrified Clay
1379	O1L37SC1	M37C1	-2.6	M37A1	-3.2	151.6	0.004	8	0.01	1.25	13.57	428.51	3.2	PVC
1349	O2L34SU1	M34U1	2.6	M34L1	1.6	241.1	0.004	8	0.013	1.02	10.98	351.02	3.1	Vitrified Clay
990	O2L34SI1	M34J1	0.1	M34A7	-0.5	104.2	0.006	6	0.013	1	6.038	194.22	3.1	Vitrified Clay
3349	O2L25SA4	M25A4	1	M25A3	0.2	124.4	0.006	8	0.01	1.6	17.13	554.7	3.1	PVC
3390	O2L25SA5	M25A4	1	M25A5	1.5	128.6	0.004	8	0.01	1.28	13.66	443.97	3.1	PVC
3392	O2L25SA6	M25A6	1.9	M25A5	1.5	110	0.004	8	0.01	1.26	13.35	435.75	3.1	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
767	O2L2SA3	M2A3	0.3	M2A2	-1.3	170.1	0.009	8	0.013	1.48	15.6	517.85	3	Vitrified Clay
1610	O2L3SD3	M3D3	1.5	M3D2	0.6	298.5	0.003	8	0.013	0.85	8.835	299.44	3	Vitrified Clay
4478	O2L4SG1	M4G1	3	M4A1	0.1	347.6	0.008	6	0.013	1.16	6.773	230.02	2.9	Vitrified Clay
567	O2L7SD4	M7D4	4.4	M7D3	2.7	329.2	0.005	6	0.013	0.93	5.4	183.62	2.9	
932	O2L5SD4	M5D4	2.2	M5D3	0.7	315.1	0.005	6	0.013	0.87	5.04	173.17	2.9	Vitrified Clay
3518	O2L35SB1	M35A1	-1.3	M35B1	2	326.2	0.01	8	0.01	2.01	20.64	709.15	2.9	PVC
3358	O2L25SB1	M25B1	0.3	M25A1	-1	149.3	0.008	8	0.013	1.39	14.12	494.2	2.9	Vitrified Clay
3195	O2L30SF1	M30F1	1.8	M30B3	1	205.5	0.004	4	0.01	0.77	1.89	69.272	2.7	PVC
804	O2L2SC2	M2C2	-1.3	M2C1	-1.8	83.4	0.006	6	0.013	0.98	5.4	198.28	2.7	Vitrified Clay
666	O2L36SG2	M36G2	6	M36G1	5	235.8	0.004	8	0.01	1.26	12.37	454.49	2.7	PVC
1719	O2L16SB1	M16B1	-2	M16A1	-2.8	114.9	0.006	12	0.013	1.58	34.91	1283.3	2.7	
3113	O2L29SA2	M29A2	-0.7	M29A1	-1.6	160.7	0.006	8	0.01	1.46	14.18	527.71	2.7	PVC
595	O2L7SF1	M7F1	4.1	M7D2	1.8	335.2	0.007	6	0.013	1.01	5.4	207.68	2.6	
3996	O2L36SD1	M36B1	-4	M36D1	1	188.9	0.026	8	0.01	3.13	29.8	1147.1	2.6	PVC
1406	O1L17SI1	M17I1	4.9	M17B5	4.7	64.3	0.004	8	0.01	1.2	11.4	439.57	2.6	PVC
4269	O1L14SF3	M14F2	2.5	M14F3	3	132.3	0.004	8	0.013	0.05	8.55	330.07	2.6	Vitrified Clay
4418	O2L30SA2	M30A2	-0.2	M30A1	-0.9	85.8	0.009	8	0.013	1.37	12.92	501.36	2.6	
1416	O1L17SE1	M17E1	7	M17B9	6.5	115	0.004	8	0.01	1.21	11.4	445.98	2.6	PVC
1004	O1L17SM7	M17M7	3.8	M17M6	2.5	319.4	0.004	8	0.01	1.21	11.4	446.35	2.6	PVC
1410	O1L17SD1	M17D1	6.2	M17B6	5.6	164.6	0.004	8	0.01	1.21	11.4	446.41	2.6	PVC
1420	O1L17SB11	M17B11	7.8	M17B10	7	190.4	0.004	8	0.01	1.23	11.4	457.07	2.5	PVC
842	O2L1SJJ3	M1JJ3	2.7	M1JJ2	2.1	81.2	0.007	6	0.013	0.98	5.1	205.35	2.5	Vitrified Clay
637	O2L36SA9	M36A9	1	M36A8	0.2	86.2	0.009	8	0.01	1.81	16.63	670.63	2.5	PVC
3414	O2L18SA2	M18A2	-2.5	M18A1	-3.1	163.8	0.004	12	0.013	0.07	24.57	991.79	2.5	
784	O2L2SD4	M2D4	3	M2D3	1.5	383.8	0.004	6	0.013	0.75	3.9	157.44	2.5	Vitrified Clay
3419	O2L18SA3	M18A3	-1.6	M18A2	-2.5	255	0.003	8	0.013	0.05	7.875	320.4	2.5	Vitrified Clay
3179	O2L30SB5	M30B5	2.2	M30B4	1.7	110.8	0.005	6	0.013	0.8	4.095	169.15	2.4	Vitrified Clay
3331	O2L25SC1	M25C1	0.6	M25A2	-0.4	133.3	0.008	6	0.013	1.05	5.355	221.35	2.4	Vitrified Clay
673	O2L36SF1	M36F1	3	M36D2	1.9	139.7	0.008	8	0.01	1.66	14.9	619.99	2.4	PVC
1427	O2L32SC1	M32A1	-0.6	M32C1	-0.4	27.1	0.007	8	0.01	1.53	13.81	574.73	2.4	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1186	O1L14SM3	M14M3	3	M14M2	2.2	209.2	0.004	8	0.013	0.93	8.265	347.74	2.4	Vitrified Clay
3305	O2L24SA1	M24D1	-0.9	M24A1	-1.6	169.2	0.004	6	0.013	0.75	3.78	159.65	2.4	Vitrified Clay
1027	O1L17SN3	M17N3	4.7	M17N2	3.7	210.4	0.005	8	0.01	1.28	11.4	483.64	2.4	PVC
639	O2L36SH2	M36H2	5.1	M36H1	3	229.5	0.009	8	0.01	1.77	15.7	669.54	2.3	PVC
1230	O1L14SA11	M14A11	2	M14A10	1.2	138.9	0.006	8	0.013	1.1	9.69	415.7	2.3	Vitrified Clay
3411	O2L18SE1	M18E1	-1.8	M18A2	-2.5	142.4	0.005	8	0.013	0.06	8.82	380.31	2.3	Vitrified Clay
663	O2L36SC5	M36C5	6	M36C4	5.1	220.1	0.004	8	0.01	1.22	10.74	463.16	2.3	PVC
4063	O2L2SR1	M2R1	1.8	M2P1	0	423.6	0.004	8	0.013	0.93	8.1	352.99	2.3	Vitrified Clay
1029	O1L17SN4	M17N4	5.3	M17N3	4.7	122.5	0.005	8	0.01	1.31	11.4	497.52	2.3	PVC
1603	O2L38SD1	M38D1	0.1	M38A6	-1	190.5	0.006	8	0.01	1.4	12.15	530.84	2.3	PVC
4479	O2L4SA1	M4A1	0.1	W-4	-4.6	7.7	0.602	6	0.013	8.39	44.53	1953.9	2.3	Vitrified Clay
592	O2L7SG1	M7G1	3.9	M7D1	1	328.7	0.009	6	0.013	1.11	5.4	237.34	2.3	
4018	O2L5SD1	M5A2	-2.7	M5D1	-1	360.5	0.005	8	0.01	1.25	10.71	475.56	2.3	PVC
1526	O2L34SC4	M34C4	2.9	M34C3	1.7	308.5	0.004	12	0.013	1.17	22.6	1009.7	2.2	Vitrified Clay
1561	O1L14SH1	M14H1	3	M14D2	1.3	47	0.036	8	0.013	0.15	22.8	1025.4	2.2	Vitrified Clay
1537	O2L34SB3	M34B3	2.9	M34B2	2.3	139.3	0.004	8	0.01	1.23	10.43	470.36	2.2	PVC
1535	O2L34SB2	M34B2	2.3	M34B1	1.7	122.7	0.004	8	0.01	1.23	10.43	471.99	2.2	PVC
647	O2L36SE1	M36E1	2.2	M36A3	-2.4	311.1	0.015	8	0.01	2.24	18.91	864.78	2.2	PVC
4028	O2L3SB1	M3A4	1.4	M3B1	1.9	100.8	0.005	6	0.013	0.78	3.705	170.08	2.2	Vitrified Clay
4066	O2L2SP2	M2P1	0	M2P2	0.5	91.8	0.006	6	0.013	0.9	4.2	196.19	2.1	
1463	O2L34SA12	M34A12	1.7	M34A11	1.5	31.8	0.004	8	0.013	0.92	7.613	359.79	2.1	Vitrified Clay
1462	O2L34SA13	M34A13	2.1	M34A12	1.7	127.9	0.003	8	0.013	0.8	6.563	314.43	2.1	Vitrified Clay
1528	O2L34SC5	M34C5	4.1	M34C4	2.9	308.2	0.004	12	0.013	1.15	21	1010.1	2.1	Vitrified Clay
1182	O1L14SM2	M14M2	2.2	M14M1	-0.4	216.3	0.012	8	0.013	1.51	12.26	591.62	2.1	Vitrified Clay
1068	O1L17SQ0	M17T1	-3.5	M17A1	-7	161.1	0.022	12	0.013	2.67	48.45	2353.3	2.1	
728	O2L3SL2	M3L2	0.9	M3L1	0.4	83.1	0.005	6	0.013	0.82	3.705	181.11	2	Vitrified Clay
4387	O2L32SB2	M32B1	2	M32B2	3	272.8	0.004	8	0.01	1.08	8.699	426.9	2	PVC
3181	O2L30SB6	M30B6	2.7	M30B5	2.2	91.7	0.005	6	0.013	0.84	3.78	186	2	Vitrified Clay
788	O2L2SD2	M2D2	0	M2D1	-1.7	68.4	0.025	6	0.013	1.8	8.1	398.66	2	Vitrified Clay
974	O2L34SF2	M34F3	2.7	M34F2	1.9	281.3	0.003	8	0.013	0.77	6.124	303.34	2	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
947	O2L4SB1	M4B1	2.5	M4A3	0.7	377.4	0.005	6	0.013	0.78	3.465	172.94	2	Vitrified Clay
1214	O1L14SS4	M14S4	3.7	M14S3	2.9	209.4	0.004	8	0.013	0.87	6.84	343.46	2	Vitrified Clay
3190	O2L30SE1	M30E1	1.5	M30B2	0	205.1	0.007	4	0.01	0.95	1.89	94.953	2	PVC
1796	O2L26SA1	M26A1	-0.1	W-26	-0.3	30.7	0.017	6	0.019	0.99	4.41	222.44	2	
798	O2L2SF1	M2F1	0.4	M2C1	-1.8	420.7	0.005	6	0.013	0.81	3.6	182.25	2	Vitrified Clay
638	O2L36SH1	M36H1	3	M36A8	0.2	96.2	0.029	8	0.01	3.01	23.56	1198.8	2	PVC
3900	O2L34SA14	M34A13	2.1	M34A14	2.3	50.2	0.003	8	0.013	0.74	5.775	296.44	1.9	
4417	O2L30SA3	M30A3	0.6	M30A2	-0.2	86.2	0.009	8	0.013	1.25	9.765	501.36	1.9	
1533	O2L34SD1	M34D1	2.9	M34B1	1.7	285.9	0.004	8	0.01	1.13	8.778	451.03	1.9	PVC
3136	O2L34SL2	M34L2	2.3	M34L1	1.6	126.4	0.006	6	0.01	1.1	4.823	248.74	1.9	PVC
1358	O2L16SA7	M16A7	2.8	M16A6	1.1	397.2	0.004	8	0.01	1.14	8.874	458.56	1.9	PVC
3988	O1L37SC1	M14D5	3.5	M14D4	2.8	225.2	0.003	8	0.013	0.04	5.7	298.04	1.9	Vitrified Clay
1314	O1L14SG2	M14G2	3.3	M14G1	2.4	203	0.004	8	0.01	0.05	8.55	448.05	1.9	PVC
1539	O2L34SB4	M34B4	3.5	M34B3	2.9	146.2	0.004	8	0.01	1.13	8.677	455.49	1.9	PVC
3126	O2L29SB2	M29B2	0	M29B1	-1	152.4	0.007	6	0.01	1.18	5.04	265.2	1.9	PVC
3225	O2L18SB2	M18B2	-1.6	M18B1	-2.4	137	0.006	8	0.013	0.05	7.875	422.13	1.9	Vitrified Clay
930	O2L5SA8	M5A8	3.1	M5A7	1.8	281.1	0.005	6	0.013	0.74	3.15	169.28	1.9	Vitrified Clay
709	O2L3SH3	M3H3	1.8	M3H2	1.3	115.2	0.005	6	0.013	0.74	3.135	169.18	1.9	Vitrified Clay
821	O2L1SB3	M1B2	1.2	M1B3	2.4	277.1	0.004	8	0.013	0.88	6.6	357.79	1.8	Vitrified Clay
1531	O2L34SD2	M34D2	3.6	M34D1	2.9	139.4	0.005	8	0.01	1.18	8.778	481.37	1.8	PVC
378	O2L3SG1	M3G1	0.2	M3A2	-1.3	398.5	0.004	8	0.013	0.81	5.985	330.52	1.8	Vitrified Clay
3902	O2L13SA1	W-13	2.7	M13A1	3.2	115.4	0.004	8	0.01	1.14	8.33	464.05	1.8	PVC
1601	O2L38SD2	M38D2	0.7	M38D1	0.2	191.8	0.002	8	0.01	0.83	6.077	341.53	1.8	PVC
671	O2L36SD3	M36D3	3	M36D2	1.9	76.5	0.014	8	0.01	2.03	14.9	837.85	1.8	PVC
967	O2L4SG2	M4G2	5.4	M4G1	3	360.7	0.007	6	0.013	0.88	3.623	205.41	1.8	Vitrified Clay
769	O2L2SJ1	M2A3	0.3	M2J1	0.1	127.5	-0.001	8	0.013	0.02	3.3	192.16	1.7	Vitrified Clay
695	O1L17SL1	M17L1	0.9	M17A8	-2.1	21.4	0.139	8	0.01	6.35	45.04	2631.4	1.7	PVC
636	O2L36SA10	M36A10	1.4	M36A9	1	88	0.005	8	0.01	1.17	8.313	487.09	1.7	PVC
1520	O2L34SC1	M34C1	-1	M34A2	-4.6	374	0.01	12	0.01	2.17	34.42	2030.2	1.7	PVC
640	O2L36SH3	M36H3	6	M36H2	5.1	213.5	0.004	8	0.01	1.12	7.852	465.33	1.7	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
585	O2L7SA4	M7A4	1.3	M7A3	-0.6	364.9	0.005	8	0.013	0.94	6.6	391.35	1.7	Vitrified Clay
757	O2L3SA6	M3A6	2.9	M3A5	1.7	259.6	0.005	6	0.013	0.72	2.85	169.07	1.7	Vitrified Clay
992	O2L34SJ2	M34K1	1.1	M34J1	0.1	182.5	0.006	6	0.013	0.8	3.15	187.35	1.7	Vitrified Clay
934	O2L5SD5	M5D5	3.4	M5D4	2.2	254	0.005	6	0.013	0.72	2.835	169.45	1.7	Vitrified Clay
1569	O1L14SH5	M14H5	5.2	M14H4	4.2	246.4	0.004	8	0.013	0.82	5.7	343.76	1.7	Vitrified Clay
3418	O2L18ASA4	M18A4	-0.9	M18A3	-1.6	164.1	0.004	8	0.013	0.04	5.67	343.92	1.6	Vitrified Clay
4104	O2L1SBB1	M1A7	1.7	M1BB1	2.4	89.8	0.008	6	0.013	0.93	3.6	218.9	1.6	Vitrified Clay
823	O2L1SB4	M1B3	2.4	M1B4	3.5	154.1	0.007	4	0.013	0.7	1.2	73.532	1.6	Vitrified Clay
4477	O2L4SH1	M4H1	2.5	M4A1	0.1	404.3	0.006	6	0.013	0.82	3.15	194.02	1.6	Vitrified Clay
1037	O1L17ST4	M17T4	1.1	M17T3	-2.8	190.2	0.021	12	0.013	2.41	37.05	2289.8	1.6	
1590	O2L16SD2	M16D2	2	M16D1	-0.1	279	0.008	8	0.013	1.11	7.554	470.5	1.6	Vitrified Clay
1310	O1L14SC11	M14C11	3.1	M14C10	2.6	135.7	0.004	8	0.01	0.05	7.125	444.74	1.6	PVC
4009	O2L9SA2	M9A1	-0.3	M9A2	1.1	236.1	0.006	12	0.013	1.29	19.69	1231.2	1.6	
3981	O2L15SA1	W-15	3.5	M15A1	4.5	266.7	0.004	8	0.01	1.01	6.738	431.72	1.6	PVC
894	O2L1SA11	M1A10	5.9	M1A11	6.4	146.8	0.003	8	0.01	0.96	6.25	411.46	1.5	PVC
1437	O2L32SD1	M32D1	1.4	M32A3	1.1	78.3	0.003	8	0.01	0.93	6.02	398.51	1.5	PVC
758	O2L3SA5	M3A5	1.7	M3A4	1.4	87.5	0.004	8	0.013	0.75	4.845	322.82	1.5	Vitrified Clay
3950	O2L29SA3	M29A2	-0.7	M29A3	0.2	149.9	0.006	8	0.01	1.23	7.875	529.4	1.5	PVC
1524	O2L34SC3	M34C3	1.7	M34C2	-0.3	30.9	0.064	8	0.01	4.12	26.4	1782.6	1.5	PVC
4153	O2L1SV1	M1U1	2.6	M1V1	3	43.4	0.009	4	0.013	0.76	1.2	81.985	1.5	Vitrified Clay
711	O2L3SH4	M3H4	2.5	M3H3	1.8	81.3	0.009	4	0.013	0.73	1.14	79.253	1.4	Vitrified Clay
4159	O2L1SS1	M1A4	1	M1S1	1.8	120.9	0.007	6	0.013	0.85	3	208.66	1.4	Vitrified Clay
613	O2L2SA5	M2A5	1.9	M2A4	1.5	124.8	0.004	8	0.013	0.77	4.8	336.41	1.4	Vitrified Clay
3435	O1L37SA1	M37A1	-3.2	W-37	-3.7	8.4	0.056	12	0.01	4.99	69.76	4904.3	1.4	PVC
1739	O2L16SB3	M16B3	-1.5	M16B2	-1.7	50.3	0.004	12	0.013	1.03	14.32	1008.4	1.4	
618	O2L3SD4	M3D4	2	M3D3	1.5	115	0.004	8	0.013	0.8	4.845	350.41	1.4	Vitrified Clay
4428	O2L16SC1	M16A1	-2.8	M16C1	2.2	437.7	0.011	8	0.013	1.3	7.875	576.76	1.4	
4057	O2L2ST1	M2R1	1.8	M2T1	2.3	85.8	0.006	6	0.013	0.8	2.7	198.53	1.4	Vitrified Clay
4030	O2L3SB2	M3B1	1.9	M3B2	2.8	214	0.005	6	0.013	0.68	2.28	169.53	1.3	Vitrified Clay
4271	O2L4SG3	M4G2	5.4	M4G3	6.2	100.2	0.008	6	0.013	0.9	2.993	224.99	1.3	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1542	O2L34SB1	M34B1	1.7	M34A1	-5.5	102.4	0.071	8	0.01	4.2	24.8	1873.1	1.3	PVC
1039	O1L17SV1	M17V1	1.8	M17T4	1.1	162.6	0.005	12	0.013	1.07	14.25	1086	1.3	
4162	O2L1SS2	M1S1	1.8	M1S2	2.5	60.4	0.012	4	0.013	0.82	1.2	91.915	1.3	Vitrified Clay
1095	O1L17SP2	M17P2	4.1	M17P1	2.9	316.4	0.004	8	0.01	0.98	5.7	441.35	1.3	PVC
1097	O1L17SP3	M17P3	4.5	M17P2	4.1	90	0.004	8	0.01	0.99	5.7	445.84	1.3	PVC
3644	O2L18ASA1	M18A-A1	-1	W-18A	-4	21.7	0.139	12	0.013	5.51	76	5961.7	1.3	
980	O2L34SH2	M34H1	-0.2	M34H2	0.9	195.1	0.006	6	0.013	0.74	2.363	186.95	1.3	Vitrified Clay
835	O2L1SH3	M1H2	3.3	M1H3	3.6	46.6	0.007	4	0.013	0.64	0.9	71.885	1.3	Vitrified Clay
1773	O2L30SA5	M30A5	2.2	M30A4	1.4	174.9	0.004	8	0.013	0.77	4.41	355.13	1.2	Vitrified Clay
1093	O1L17SP1	M17P1	2.9	M17A1	-7	91.4	0.108	8	0.01	5.02	28.5	2316.4	1.2	PVC
3144	O2L34SL3	M34L3	2.9	M34L2	2.3	91.7	0.006	6	0.01	0.99	3.09	254.72	1.2	PVC
4098	O2L1SHH1	M1A9	3	M1HH1	3.5	77.2	0.006	6	0.013	0.77	2.4	198.6	1.2	Vitrified Clay
4050	O2L2SR3	M2R2	3.2	M2R3	3.7	81.2	0.006	6	0.013	0.77	2.4	198.81	1.2	Vitrified Clay
3320	O2L24SA2	M24A2	-1	M24A1	-1.6	142.9	0.004	6	0.013	0.62	1.89	159.05	1.2	Vitrified Clay
755	O2L3SA7	M3A7	3.5	M3A6	2.9	148.7	0.005	6	0.013	0.65	1.995	169.06	1.2	Vitrified Clay
819	O2L1SF1	M1F1	2.5	M1B2	1.2	315.9	0.004	8	0.013	0.76	4.2	356.39	1.2	Vitrified Clay
806	O2L2SC3	M2C3	0.9	M2C2	-1.3	422.1	0.005	6	0.013	0.7	2.1	182.37	1.2	Vitrified Clay
800	O2L2SF2	M2F2	2.1	M2F1	0.4	318	0.005	6	0.013	0.69	2.1	183.59	1.1	Vitrified Clay
649	O2L36SE2	M36E2	6	M36E1	2.2	273.3	0.014	8	0.01	1.76	9.457	827	1.1	PVC
1786	O2L30SA1	M30A1	-0.9	W-30	-5.5	19.7	0.23	8	0.013	5.12	29.61	2601.4	1.1	
581	O2L7SA6	M7A6	4.9	M7A5	3.3	302.5	0.005	6	0.013	0.69	2.1	184.85	1.1	Vitrified Clay
1046	O1L17ST7	M17T7	2.4	M17T6	2.1	93.7	0.004	12	0.013	0.95	11.4	1004.7	1.1	
1048	O1L17ST6	M17T6	2.1	M17T5	1.8	68.2	0.004	12	0.013	0.95	11.4	1006.3	1.1	
3948	O2L10SA1	W-10	4.4	M10A1	5.5	238.1	0.005	6	0.01	0.83	2.479	222.53	1.1	PVC
1708	O2L38SC2	M38C1	-0.6	M38C2	1	264.1	0.006	12	0.013	1.18	13.94	1252.3	1.1	
1400	O1L17SC1	M17C1	3.7	M17B3	3.4	65.6	0.004	12	0.013	0.03	11.4	1025.7	1.1	
901	O2L23SB2	M23B2	3.5	M23B1	1.9	401.3	0.004	8	0.013	0.72	3.792	342.43	1.1	Vitrified Clay
3410	O2L18SE2	M18E2	-0.6	M18E1	-1.8	282.2	0.004	8	0.013	0.02	3.78	343.2	1.1	Vitrified Clay
827	O2L1SH1	M1B3	2.4	M1H1	2.9	94.6	0.006	8	0.013	0.86	4.5	409.82	1.1	Vitrified Clay
584	O2L7SA5	M7A5	3.3	M7A4	1.3	399.6	0.005	8	0.013	0.8	4.2	383.71	1.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
978	O2L34SH1	M34F1	0.8	M34H1	-0.2	109.3	-0.01	8	0.013	0.04	5.775	530.12	1.1	Vitrified Clay
3984	O1L37SC2	M37C1	-2.6	M37C2	-1.4	255.1	0.005	8	0.01	1.03	5.221	497.45	1	PVC
4122	O2L1SEE1	M1BB1	2.4	M1EE1	2.9	49.2	0.01	4	0.013	0.71	0.9	86.119	1	Vitrified Clay
1049	O1L17ST5	M17T5	1.8	M17T4	1.1	145.9	0.005	12	0.013	1.02	11.4	1107.6	1	
1232	O1L14SBB1	M14BB1	3.3	M14A11	2	308.7	0.004	8	0.013	0.7	3.42	342.62	1	Vitrified Clay
1190	O1L14SM4	M14M4	4.3	M14M3	3	319.5	0.004	8	0.013	0.7	3.42	343.3	1	Vitrified Clay
1246	O1L14SZ1	M14Z1	4.2	M14A10	1.2	321.9	0.009	8	0.013	1.05	5.13	519.69	1	Vitrified Clay
1508	O2L18ASD1	M18A-D1	2.5	M18A-A6	1.2	315.6	0.004	8	0.01	0.91	4.41	447.27	1	PVC
4072	O2L2SJ2	M2J1	0.1	M2J2	1	78.1	0.012	4	0.013	0.74	0.9	91.672	1	Vitrified Clay
3428	O2L25SA1	M25A1	-1	W-25	-5.9	50.8	0.097	12	0.013	4.35	48.25	4982.7	1	
722	O2L3SL3	M3L3	1.7	M3L2	0.9	125.3	0.007	6	0.013	0.74	1.995	207.43	1	Vitrified Clay
764	O2L2SB2	M2B2	2	M2B1	1	179.7	0.006	6	0.013	0.67	1.8	187.85	1	Vitrified Clay
1360	O2L16SA8	M16A8	3.5	M16A7	2.8	165.8	0.005	8	0.01	0.96	4.568	477.36	1	PVC
4004	O2L13SA2	M13A1	3.2	M13A2	4.5	310.7	0.004	8	0.013	0.7	3.334	350.8	1	
4107	O2L1SKK1	M1BB1	2.4	M1KK1	3.5	48.2	0.023	4	0.013	1.03	1.2	129.03	0.9	Vitrified Clay
611	O2L2SO1	M2O1	2.4	M2A4	1.5	315.3	0.003	8	0.013	0.59	2.7	297.71	0.9	Vitrified Clay
782	O2L2SI1	M2I1	4	M2D4	3	162	0.006	4	0.013	0.53	0.6	67.101	0.9	Vitrified Clay
1148	O1L14SJ1	M14J1	-1.9	M14A4	-2.9	254.3	0.004	8	0.01	0.03	3.99	446.55	0.9	PVC
1362	O2L16SA9	M16A9	3.9	M16A8	3.5	76.3	0.005	8	0.01	1.01	4.568	516.97	0.9	PVC
1218	O1L14SS5	M14S5	4.7	M14S4	3.7	280	0.004	8	0.013	0.63	2.85	324.1	0.9	Vitrified Clay
380	O2L3SG2	M3G2	1.7	M3G1	0.2	419.3	0.004	8	0.013	0.63	2.85	324.4	0.9	Vitrified Clay
4105	O2L1SBB2	M1BB1	2.4	M1BB2	3	127.3	0.005	6	0.013	0.6	1.5	172.91	0.9	Vitrified Clay
619	O2L3SE1	M3E1	2.4	M3D3	1.5	300.9	0.003	8	0.013	0.58	2.565	296.6	0.9	Vitrified Clay
4032	O2L3SB3	M3B2	2.8	M3B3	3.3	104.3	0.005	6	0.013	0.58	1.425	169.07	0.8	Vitrified Clay
1317	O1L17SQ5	M17Q5	5.3	M17Q4	4.1	301.2	0.004	8	0.013	0.66	2.85	340.88	0.8	Vitrified Clay
4112	O2L1SBB3	M1BB2	3	M1BB3	3.9	118.3	0.008	4	0.013	0.57	0.6	74.498	0.8	Vitrified Clay
614	O2L2SA6	M2A6	2.8	M2A5	1.9	296.5	0.003	8	0.013	0.57	2.4	298.8	0.8	Vitrified Clay
1774	O2L30SI1	M30I1	2	M30A4	1.4	69.2	0.009	4	0.013	0.6	0.63	79.509	0.8	Vitrified Clay
1754	O2L31SB4	M31B4	3.4	M31B3	1.7	470.5	0.004	12	0.013	0.83	7.72	975.16	0.8	
355	O1L17SJ2	M17J2	4.8	M17J1	3.7	259	0.004	8	0.01	0.86	3.563	451.05	0.8	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
812	O2L2SR2	M2R2	3.2	M2R1	1.8	334.5	0.004	8	0.013	0.67	2.7	355.61	0.8	Vitrified Clay
1035	O1L17SU1	M17U1	-2.3	M17T3	-2.8	61.2	0.009	12	0.013	1.25	11.4	1501.6	0.8	
4160	O2L1SU1	M1S1	1.8	M1U1	2.6	83.5	0.01	6	0.013	0.81	1.8	246.46	0.7	Vitrified Clay
909	O2L5SB1	M5B1	3	M5A3	-2.4	287.8	0.019	6	0.013	1.14	2.52	345.61	0.7	Vitrified Clay
1770	O2L30SA6	M30A6	2.7	M30A5	2.2	104.2	0.005	6	0.013	0.57	1.26	174.43	0.7	Vitrified Clay
3903	O2L5SC1	M5A1	-2.9	M5C1	2	250.8	0.02	6	0.013	1.15	2.52	352.74	0.7	Vitrified Clay
1158	O1L14SL1	M14L1	0.1	M14A5	-2.4	327.2	0.007	8	0.01	1.11	4.275	607.64	0.7	PVC
1142	O1L14SI1	M14I1	-0.8	M14A4	-2	306.5	0.004	8	0.01	0.82	3.135	446.62	0.7	PVC
4208	O2L30SA6	M30A7	2.8	M30A6	2.7	29.1	0.005	6	0.013	0.59	1.26	180.73	0.7	Vitrified Clay
4234	O2L7SC4	M7C3	0.7	M7C4	3	468.5	0.005	6	0.013	0.57	1.2	176.44	0.7	Vitrified Clay
1366	O2L16SG1	M16G1	2.5	M16A6	1.1	320.9	0.004	12	0.013	0.84	7.088	1048.7	0.7	
4034	O2L3SB4	M3B3	3.3	M3B4	3.6	62.9	0.005	6	0.013	0.55	1.14	171.05	0.7	Vitrified Clay
4229	O2L25SJ1	M25B2	0.9	M25J1	3	400.1	0.005	6	0.013	0.58	1.2	181.15	0.7	Vitrified Clay
766	O2L2SB1	M2B1	1	M2A2	-1.3	308.4	0.007	8	0.013	0.83	3	467.41	0.6	Vitrified Clay
1077	O1L17SG1	M17H3	4.5	M17H2	3	366.1	0.004	8	0.01	0.79	2.85	445.26	0.6	PVC
1771	O2L30SK1	M30K1	3.1	M30A5	2.2	70.4	0.014	4	0.013	0.71	0.63	99.254	0.6	Vitrified Clay
1772	O2L30SJ1	M30J1	3.5	M30A5	2.2	99	0.014	4	0.013	0.71	0.63	99.722	0.6	Vitrified Clay
3172	O2L30SC1	M30C1	-0.5	M30A1	-0.9	29.6	0.014	6	0.013	0.95	1.89	300.19	0.6	Vitrified Clay
1204	O1L14SX1	M14X1	2	M14S1	1	246.8	0.004	8	0.013	0.61	2.138	341.77	0.6	Vitrified Clay
1737	O2L16SH1	M16H1	-1.9	M16B1	-2	32.1	0.004	12	0.013	0.8	6.3	1017.5	0.6	
4214	O2L25SD1	M25C1	0.6	M25D1	2.3	116.5	0.014	4	0.013	0.72	0.63	102.26	0.6	Vitrified Clay
831	O2L1SI1	M1H1	2.9	M1H2	3.3	61.4	0.007	8	0.013	0.78	2.7	444.36	0.6	Vitrified Clay
771	O2L2SL1	M2L1	0.6	M2J1	0.1	86	0.006	6	0.013	0.62	1.2	197.66	0.6	Vitrified Clay
1236	O1L14SAA2	M14AA1	3.9	M14A10	1.2	248.8	0.011	8	0.013	1	3.42	568.69	0.6	Vitrified Clay
617	O2L3SD4	M3D5	4	M3D4	2	318.4	0.006	8	0.013	0.75	2.565	426.62	0.6	Vitrified Clay
955	O2L4SD1	M4D1	3.5	M4A4	1.2	332.6	0.007	6	0.013	0.65	1.26	210.31	0.6	Vitrified Clay
4198	O2L34SA15	M34A15	3.3	M34A14	2.3	255.6	0.004	8	0.01	0.77	2.625	445.41	0.6	PVC
1423	O2L34SE2	M34E2	1.5	M34E1	-0.9	213.2	0.011	6	0.01	1.08	2.042	349.5	0.6	PVC
4238	O2L7SM1	M7C2	-0.1	M7M1	3	463.4	0.007	6	0.013	0.63	1.2	205.96	0.6	Vitrified Clay
904	O2L23SA2	M17A2	2.1	M17A1	0.3	327.5	0.006	8	0.013	0.7	2.333	404.28	0.6	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1150	O1L14SJ2	M14J2	-0.7	M14J1	-1.9	303.7	0.004	8	0.01	0.77	2.565	445.06	0.6	PVC
1368	O2L16SG2	M16G2	3.4	M16G1	2.5	220.8	0.004	8	0.013	0.62	2.048	361.35	0.6	
4287	O1L14SC7	M14C6	0.5	M14E1	4.8	106.4	0.041	6	0.013	0.03	2.85	508.53	0.6	
972	O2L34SF2	M34F4	3.4	M34F3	2.7	291.5	0.002	12	0.013	0.59	4.286	772.29	0.6	
4388	O2L32SB1	M32B1	2	W-32	0	46.8	0.043	12	0.013	2.5	17.97	3305.6	0.5	
1335	O1L40SB2	M40A1	1.2	M40B2	1.9	188.5	0.004	8	0.01	0.77	2.45	453.49	0.5	PVC
1775	O2L30SH1	M30H1	3.1	M30A4	1.4	86.1	0.02	4	0.013	0.81	0.63	120.01	0.5	Vitrified Clay
3166	O2L30SA11	M30A11	4.4	M30A10	4	70.5	0.005	4	0.013	0.4	0.315	60.183	0.5	Vitrified Clay
1220	O1L14ST1	M14T1	3.1	M14S2	2.1	276.9	0.004	8	0.013	0.56	1.71	332.36	0.5	Vitrified Clay
4149	O2L1SU2	M1U1	2.6	M1U2	3.6	52.8	0.019	4	0.013	0.78	0.6	117.52	0.5	Vitrified Clay
1734	O2L16SF1	M16F1	3	M16B2	-1.7	436	0.011	8	0.013	0.93	2.858	560.08	0.5	
4175	O2L1SK1	M1E2	0.7	M1K1	2	66.3	0.02	6	0.013	1.05	1.8	353.44	0.5	Vitrified Clay
790	O2L2SE1	M2E1	2	M2D1	-1.7	414.5	0.009	6	0.013	0.7	1.2	238.36	0.5	Vitrified Clay
753	O2L3SA8	M3A8	4.3	M3A7	3.5	166.7	0.005	6	0.013	0.5	0.855	170.04	0.5	Vitrified Clay
1234	O1L14SBB2	M14BB2	4.2	M14BB1	3.3	246.9	0.004	8	0.013	0.57	1.71	342.35	0.5	Vitrified Clay
1176	O1L14SN1	M14N1	0.9	M14M1	-0.4	327.3	0.004	8	0.013	0.57	1.71	342.87	0.5	Vitrified Clay
4207	O2L30SA8	M30A8	3.1	M30A7	2.8	52.5	0.006	6	0.013	0.56	0.945	190.42	0.5	Vitrified Clay
1733	O2L16SE1	M16E1	3	M16B1	-2	435.3	0.012	8	0.013	0.96	2.858	581.84	0.5	
762	O2L2SB2	M2B3	3	M2B2	2	176.5	0.006	6	0.013	0.55	0.9	189.57	0.5	Vitrified Clay
228	O1L17SJ3	M17J3	5.2	M17J2	4.8	51.5	0.009	6	0.01	0.87	1.425	302.67	0.5	PVC
385	O2L23SA1	M17A1	0.3	W-23	-6.4	11	0.608	12	0.013	8.78	58.63	12469	0.5	
4044	O2L2SG1	M2F2	2.1	M2G1	2.8	135	0.006	4	0.013	0.41	0.3	64.717	0.5	Vitrified Clay
4220	O2L25SF1	M25A1	-1	M25F1	2	115.2	0.026	4	0.013	0.9	0.63	137.14	0.5	Vitrified Clay
4091	O2L1SQ1	M1A3	-0.1	M1Q1	2	86.1	0.024	6	0.013	1.12	1.8	392.33	0.5	Vitrified Clay
4224	O2L25SI1	M25B1	0.3	M25I1	3	105.6	0.026	4	0.013	0.9	0.63	137.33	0.5	Vitrified Clay
3106	O2L34SO1	M34O1	2.9	M34A9	0.1	177.4	0.016	6	0.01	1.17	1.89	412.04	0.5	PVC
802	O2L2SF3	M2F3	2.6	M2F2	2.1	89.5	0.006	4	0.013	0.43	0.3	66.799	0.4	Vitrified Clay
3599	O1L37SE1	M37C1	-2.6	M37E1	-1.6	235	0.004	8	0.01	0.75	2.088	471.24	0.4	PVC
3598	O1L37SB1	M37A2	-2.8	M37B1	-1.7	233.9	0.005	8	0.01	0.77	2.088	476.91	0.4	PVC
4118	O2L1SCC2	M1CC1	3.5	M1CC2	4	77.5	0.006	4	0.013	0.43	0.3	68.59	0.4	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
825	O2L1SB5	M1B4	3.5	M1B5	4.5	152.8	0.007	4	0.013	0.43	0.3	69.091	0.4	Vitrified Clay
850	O2L1SOO1	M1JJ1	1.7	M1OO1	4.5	402.4	0.007	6	0.013	0.6	0.9	210.2	0.4	Vitrified Clay
1498	O2L18ASB1	M18A-B1	0.9	M18A-A3	-0.3	279.5	0.004	8	0.01	0.71	1.89	446.28	0.4	PVC
1768	O2L30SA9	M30A9	3.8	M30A8	3.1	198.2	0.004	6	0.013	0.42	0.63	149.65	0.4	Vitrified Clay
1240	O1L14SA12	M14A12	3.5	M14A11	2	375.3	0.004	8	0.013	0.54	1.425	342.87	0.4	Vitrified Clay
1162	O1L14SK1	M14K1	0.6	M14A5	-2.4	260.8	0.012	8	0.01	1.18	3.135	757.49	0.4	PVC
4169	O2L1SM1	M1E1	-0.3	M1M1	2	75.2	0.03	4	0.013	0.9	0.6	147.72	0.4	Vitrified Clay
3520	O2L35SC1	M35A1	-1.3	M35C1	0	95.3	0.014	8	0.01	1.28	3.317	823.44	0.4	PVC
3156	O2L30SL1	M30A7	2.8	M30L1	3.8	118.5	0.008	4	0.013	0.47	0.315	78.474	0.4	Vitrified Clay
4109	O2L1SKK2	M1KK1	3.5	M1KK2	4.5	130.6	0.008	4	0.013	0.45	0.3	74.737	0.4	Vitrified Clay
1192	O1L14SR1	M14R1	4.4	M14M4	4.3	130.4	0.001	6	0.013	0.2	0.285	73.133	0.4	Vitrified Clay
4100	O2L1SII1	M1HH1	3.5	M1II1	5	181.6	0.008	4	0.013	0.48	0.3	77.63	0.4	Vitrified Clay
1144	O1L14SI2	M14I2	0.5	M14I1	-0.8	310.4	0.004	8	0.01	0.69	1.71	447.43	0.4	PVC
4114	O2L1SBB4	M1BB3	3.9	M1BB4	5.1	138.4	0.009	4	0.013	0.49	0.3	79.521	0.4	Vitrified Clay
4185	O2L7SB2	M1D3	3	M1D4	4	114.4	0.009	4	0.013	0.49	0.3	79.857	0.4	Vitrified Clay
4197	O2L34SA16	M34A16	4.9	M34A15	3.3	402.3	0.004	4	0.01	0.43	0.263	70.459	0.4	PVC
4247	O2L7SJ1	M7C1	-0.9	M7J1	4	296.3	0.017	6	0.013	0.87	1.2	323.84	0.4	Vitrified Clay
4068	O2L2SP3	M2P2	0.5	M2P3	3	262.3	0.009	4	0.013	0.5	0.3	82.722	0.4	Vitrified Clay
4102	O2L1SHH2	M1HH1	3.5	M1HH2	5.2	180.7	0.009	4	0.013	0.5	0.3	82.851	0.4	Vitrified Clay
4059	O2L2ST2	M2T1	2.3	M2T2	4.2	196	0.01	4	0.013	0.5	0.3	83.315	0.4	Vitrified Clay
3153	O2L34ST1	M34T1	3.5	M34A14	2.3	287.1	0.004	4	0.01	0.44	0.263	73.273	0.4	PVC
4200	O2L29SA4	M29A3	0.2	M29A4	1.1	166	0.006	8	0.01	0.8	1.89	527.72	0.4	PVC
4078	O2L2SB2	M2B3	3	M2B4	4	102.3	0.01	4	0.013	0.51	0.3	84.454	0.4	Vitrified Clay
4061	O2L2SU1	M2T1	2.3	M2U1	3.5	125.5	0.01	4	0.013	0.51	0.3	84.562	0.4	Vitrified Clay
4054	O2L2SS1	M2R3	3.7	M2S1	4.7	101.9	0.01	4	0.013	0.51	0.3	85.33	0.4	Vitrified Clay
4036	O2L3SB5	M3B4	3.6	M3B5	4.4	85.4	0.009	4	0.013	0.49	0.285	81.087	0.4	Vitrified Clay
751	O2L3SA9	M3A9	5.2	M3A8	4.3	99.2	0.009	4	0.013	0.49	0.285	81.353	0.4	Vitrified Clay
4157	O2L1SW1	M1V1	3	M1W1	4	98.6	0.01	4	0.013	0.52	0.3	86.013	0.3	Vitrified Clay
3108	O2L34SO2	M34O2	3.3	M34O1	2.9	118.2	0.003	6	0.01	0.49	0.63	183.2	0.3	PVC
591	O2L7SG2	M7G2	5.6	M7G1	3.9	342.6	0.005	6	0.013	0.47	0.6	177.4	0.3	

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
223	O1L17SK1	M17K1	5.6	M17J2	4.8	50.6	0.017	6	0.01	1.12	1.425	421.99	0.3	PVC
566	O2L7SD5	M7D5	6.1	M7D4	4.4	340.5	0.005	6	0.013	0.47	0.6	177.93	0.3	
594	O2L7SF2	M7F2	5.8	M7F1	4.1	338.4	0.005	6	0.013	0.47	0.6	178.48	0.3	
4420	O2L30SD1	M30A2	-0.2	M30D1	2	201.5	0.011	8	0.013	0.84	1.89	565.04	0.3	Vitrified Clay
1541	O2L34SB5	M34B5	4.3	M34B4	3.5	176.1	0.005	8	0.01	0.7	1.58	475.18	0.3	PVC
713	O2L3SH5	M3H4	2.5	M3H5	4	149.7	0.01	4	0.013	0.51	0.285	85.772	0.3	Vitrified Clay
3164	O2L30SA10	M30A10	4	M30A9	3.8	35.3	0.006	6	0.013	0.5	0.63	189.65	0.3	Vitrified Clay
815	O2L1SG1	M1G1	4	M1F1	2.5	130.2	0.011	4	0.013	0.54	0.3	91.187	0.3	Vitrified Clay
3427	O2L24SA1	M24A1	-1.6	W-24	-3.9	70.8	0.033	12	0.013	1.55	9.45	2895	0.3	
4120	O2L1SDD1	M1CC1	3.5	M1DD1	4	42.2	0.012	4	0.013	0.55	0.3	93.003	0.3	Vitrified Clay
1152	O1L14SJ3	M14J3	0.3	M14J2	-0.7	247	0.004	8	0.01	0.64	1.425	446.35	0.3	PVC
1188	O1L14SQ1	M14Q1	4.3	M14M3	3	115	0.011	6	0.013	0.7	0.855	268.8	0.3	Vitrified Clay
4093	O2L1SQ2	M1Q1	2	M1Q2	3.5	122	0.012	4	0.013	0.56	0.3	94.728	0.3	Vitrified Clay
4205	O2L29SB3	M29B3	2	M29B2	0	401.7	0.005	8	0.01	0.71	1.575	497.47	0.3	PVC
3138	O2L34SM1	M34M1	2.8	M34L2	2.3	85.6	0.006	6	0.01	0.64	0.788	256.41	0.3	PVC
1422	O2L34SE1	M34A6	-1.9	M34E1	-0.9	335.6	0.003	10	0.01	0.62	2.042	687.31	0.3	PVC
1279	O2L22SB2	M22B2	2.5	M22B1	1.2	179.2	0.007	6	0.013	0.53	0.63	213.64	0.3	
3094	O2L29SA1	M29A1	-1.6	W-29	-5.9	16.2	0.267	12	0.013	4.7	24.26	8266.1	0.3	
575	O2L7SH1	M7H1	4.7	M7D2	1.8	426.1	0.007	6	0.013	0.51	0.6	207.04	0.3	Vitrified Clay
4453	O2L38SA7	M38A6	-1.1	M38A7	-0.5	81.2	0.007	8	0.01	0.84	1.715	596	0.3	PVC
4151	O2L1SU3	M1U2	3.6	M1U3	4.5	58.4	0.015	4	0.013	0.58	0.3	105.99	0.3	Vitrified Clay
4212	O2L25SC2	M25C1	0.6	M25C2	2.3	212.1	0.008	6	0.013	0.55	0.63	223.47	0.3	Vitrified Clay
1041	O1L17SV2	M17V2	2.8	M17V1	1.8	228.9	0.004	12	0.013	0.63	2.85	1013.8	0.3	
1738	O2L16SB4	M16B4	5	M16B3	-1.5	334.2	0.019	12	0.013	1.37	6.242	2221.4	0.3	
4095	O2L1SR1	M1Q1	2	M1R1	4	122.7	0.016	4	0.013	0.59	0.3	109.04	0.3	Vitrified Clay
715	O2L3SI1	M3I1	4	M3H3	1.8	143.3	0.015	4	0.013	0.57	0.285	106.05	0.3	Vitrified Clay
4006	O2L10SA2	M10A1	5.5	M10A2	6	103.8	0.005	6	0.013	0.43	0.467	174.81	0.3	
4124	O2L1SEE2	M1EE1	2.9	M1EE2	4	62.7	0.018	4	0.013	0.61	0.3	113.11	0.3	Vitrified Clay
982	O2L34SH3	M34H2	0.9	M34H3	2.5	261.6	0.006	6	0.013	0.48	0.525	199.95	0.3	Vitrified Clay
4179	O2L1SK2	M1K1	2	M1K2	4.5	137.6	0.018	4	0.013	0.62	0.3	115.13	0.3	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
574	O2L7SI2	M7I2	4.6	M7D1	1	430	0.008	6	0.013	0.56	0.6	231.06	0.3	Vitrified Clay
4177	O2L1SL1	M1K1	2	M1L1	4.5	131	0.019	4	0.013	0.63	0.3	118.02	0.3	Vitrified Clay
4267	O1L37SA4	M37A4	-0.4	M37A5	3	204.8	0.017	6	0.01	1.01	1.044	423.66	0.2	PVC
4216	O2L25SE1	M25A2	-0.4	M25E1	3	293.9	0.012	6	0.013	0.63	0.63	270.86	0.2	Vitrified Clay
3986	O1L37SC3	M37C2	-1.4	M37C3	-0.4	241.4	0.004	8	0.01	0.59	1.044	451.48	0.2	PVC
1289	O2L26SA2	M26A1	0.8	M26A2	2.7	261.3	0.007	6	0.01	0.64	0.63	278.43	0.2	PVC
1242	O1L14SA13	M14A13	5	M14A12	3.5	145.1	0.01	6	0.013	0.59	0.57	256.01	0.2	Vitrified Clay
4195	O2L34SS1	M34A13	2.1	M34S1	3.8	85.5	0.02	4	0.013	0.62	0.263	120.45	0.2	
3146	O2L34SL4	M34L4	3.9	M34L3	2.9	193.5	0.006	6	0.01	0.55	0.525	242.9	0.2	PVC
744	O2L3S132	M3C2	2	M3A4	1.4	213.7	0.003	6	0.013	0.3	0.285	134.54	0.2	Vitrified Clay
984	O2L34SI1	M34I1	1.5	M34H1	-0.2	169.9	0.01	6	0.013	0.58	0.525	253.69	0.2	Vitrified Clay
777	O2L2SL2	M2L2	3	M2L1	0.6	78.1	0.03	4	0.013	0.76	0.3	148.79	0.2	
4415	O2L30SG1	M30A3	0.6	M30G1	2	193.9	0.007	8	0.013	0.6	0.945	468.97	0.2	Vitrified Clay
773	O2L2SM1	M2M1	3	M2L1	0.6	77	0.031	4	0.013	0.76	0.3	149.83	0.2	Vitrified Clay
907	O2L5SB2	M5B2	4	M5B1	3	247.1	0.004	6	0.013	0.36	0.315	160.2	0.2	Vitrified Clay
936	O2L5SA9	M5A9	4.5	M5A8	3.1	319	0.005	6	0.013	0.38	0.315	169.18	0.2	Vitrified Clay
938	O2L5SD6	M5D6	4.6	M5D5	3.4	274.1	0.005	6	0.013	0.38	0.315	169.39	0.2	Vitrified Clay
969	O2L4SA6	M4A6	4	M4A5	1.8	491.3	0.005	6	0.013	0.38	0.315	169.66	0.2	Vitrified Clay
949	O2L4SB2	M4B2	4.3	M4B1	2.5	390	0.005	6	0.013	0.38	0.315	171.56	0.2	Vitrified Clay
3403	O2L18ASA5	M18A5	0.3	M18A4	-0.9	301.5	0.004	8	0.013	0	0.63	343.58	0.2	Vitrified Clay
941	O2L4SH2	M4H2	4	M4H1	2.5	316.8	0.005	6	0.013	0.38	0.315	173.3	0.2	Vitrified Clay
3171	O2L30SC2	M30C2	1.3	M30C1	-0.5	360.4	0.005	6	0.013	0.39	0.315	177.98	0.2	Vitrified Clay
4138	O2L1SAA1	M1A6	1.4	M1AA1	4	65	0.04	4	0.013	0.84	0.3	169.78	0.2	Vitrified Clay
4126	O2L1SEE3	M1EE1	2.9	M1EE3	4	27.8	0.04	4	0.013	0.84	0.3	169.96	0.2	Vitrified Clay
3185	O2L30SM1	M30M1	4	M30B6	2.7	258.1	0.005	6	0.013	0.39	0.315	178.71	0.2	Vitrified Clay
1216	O1L14SW1	M14W1	4.2	M14S4	3.7	118.6	0.004	6	0.013	0.36	0.285	161.86	0.2	Vitrified Clay
4040	O2L2SD5	M2D4	3	M2D5	4.5	322.1	0.005	6	0.013	0.36	0.3	171.84	0.2	Vitrified Clay
3912	O2L7SA7	M7A6	4.9	M7A7	6.1	243.7	0.005	6	0.013	0.37	0.3	176.7	0.2	
1224	O1L14ST2	M14T2	3.4	M14T1	3.1	76.5	0.004	6	0.013	0.35	0.285	167.92	0.2	Vitrified Clay
1364	O2L30SA10	M16A10	5.1	M16A9	3.9	259.9	0.004	8	0.01	0.55	0.788	466.92	0.2	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
573	O2L7SB2	M7B2	4.9	M7B1	3.6	269.8	0.005	6	0.013	0.37	0.3	178.14	0.2	Vitrified Clay
1222	O1L14SU1	M14U1	3.5	M14T1	3.1	85	0.005	6	0.013	0.35	0.285	170.58	0.2	Vitrified Clay
838	O2L1SJJ4	M1JJ4	4.5	M1JJ3	2.7	353.7	0.005	6	0.013	0.37	0.3	181.13	0.2	Vitrified Clay
1206	O1L14SX2	M14X2	3.3	M14X1	2	203.2	0.006	8	0.013	0.51	0.713	432.09	0.2	Vitrified Clay
1248	O1L14SZ2	M14Z2	5.5	M14Z1	4.2	324.6	0.004	8	0.013	0.41	0.57	345.84	0.2	Vitrified Clay
1212	O1L14SV1	M14V1	3.9	M14S3	2.9	244	0.004	8	0.013	0.41	0.57	350.68	0.2	Vitrified Clay
808	O2L2SC4	M2C4	2.3	M2C3	0.9	265.7	0.005	6	0.013	0.38	0.3	184.63	0.2	Vitrified Clay
4070	O2L2SQ1	M2P2	0.5	M2Q1	1.9	253.9	0.005	6	0.013	0.38	0.3	185.02	0.2	Vitrified Clay
1238	O1L14SAA2	M14AA2	4.8	M14AA1	3.9	190	0.004	8	0.013	0.42	0.57	356.31	0.2	Vitrified Clay
4052	O2L2SR4	M2R3	3.7	M2R4	4.7	172.7	0.006	6	0.013	0.39	0.3	188.12	0.2	Vitrified Clay
4232	O2L25SB3	M25B2	0.9	M25B3	5	164.1	0.025	6	0.013	0.81	0.63	396.55	0.2	Vitrified Clay
1244	O1L14SBB3	M14BB3	5.2	M14BB2	4.2	191.8	0.005	6	0.013	0.37	0.285	180.39	0.2	Vitrified Clay
833	O2L1SI1	M1H2	3.3	M1I1	4.5	208.8	0.006	6	0.013	0.39	0.3	190.11	0.2	Vitrified Clay
779	O2L2SN1	M2N1	0.9	M2J1	0.1	139.6	0.006	6	0.013	0.39	0.3	190.42	0.2	Vitrified Clay
4145	O2L1SX1	M1A5	1.1	M1X1	4	57.3	0.05	4	0.013	0.92	0.3	190.78	0.2	Vitrified Clay
4184	O2L7SB2	M1D2	0.9	M1D3	3	413.4	0.005	8	0.013	0.45	0.6	383.21	0.2	Vitrified Clay
4455	O2L38SA8	M38A7	-0.5	M38A8	7	308.6	0.024	8	0.01	1.28	1.715	1099.1	0.2	PVC
994	O2L34SK2	M34K2	3	M34K1	1.1	410	0.005	6	0.013	0.35	0.263	171.43	0.2	Vitrified Clay
844	O2L1SNN1	M1JJ2	2.1	M1NN1	4.5	391.2	0.006	6	0.013	0.4	0.3	196.01	0.2	Vitrified Clay
3183	O2L30SB7	M30B7	3.6	M30B6	2.7	220.4	0.004	6	0.01	0.42	0.315	209.19	0.2	PVC
916	O2L5SC2	M5C2	4	M5C1	2	273	0.007	6	0.013	0.43	0.315	215.53	0.1	Vitrified Clay
1504	O2L18ASC1	M18A-C1	2.3	M18A-A5	0.7	412.6	0.004	8	0.01	0.5	0.63	437.67	0.1	PVC
3123	O2L29SF1	M29F1	2.5	M29B1	-1	194.8	0.018	6	0.01	0.88	0.63	438.83	0.1	PVC
3425	O2L1SC1	M1C1	2	M1A1	-1	105.1	0.029	12	0.013	1.37	3.9	2718.9	0.1	
3408	O2L18SE3	M18E3	1.3	M18E2	-0.6	488.8	0.004	8	0.01	0.51	0.63	446.46	0.1	PVC
840	O2L1SKK1	M1JJ3	2.7	M1KK1	4.5	252.5	0.007	6	0.013	0.43	0.3	214.39	0.1	Vitrified Clay
957	O2L4SE1	M4E1	4	M4D1	3.5	61	0.008	6	0.013	0.45	0.315	227.98	0.1	Vitrified Clay
4155	O2L1SV2	M1V1	3	M1V2	4	15.4	0.065	4	0.013	0.95	0.3	217.54	0.1	Vitrified Clay
4038	O2L3SC1	M3B1	1.9	M3C1	4	35.5	0.061	4	0.013	0.91	0.285	210.32	0.1	Vitrified Clay
4255	O2L24SH1	M24A1	-1.6	M24H1	3	134.3	0.034	6	0.013	0.92	0.63	465.08	0.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
4076	O2L2SK1	M2J2	1	M2K1	3	29.5	0.068	4	0.013	0.97	0.3	222.58	0.1	Vitrified Clay
792	O2L2SE2	M2E2	3	M2E1	2	126.6	0.008	6	0.013	0.44	0.3	223.85	0.1	Vitrified Clay
4083	O2L1SO1	M1A2	-0.8	M1O1	2	87.4	0.032	6	0.013	0.89	0.6	448.54	0.1	Vitrified Clay
4249	O2L24SD2	M24D1	-0.9	M24D2	3.7	130.1	0.035	6	0.013	0.94	0.63	473.45	0.1	Vitrified Clay
4074	O2L2SJ3	M2J2	1	M2J3	4	41.9	0.072	4	0.013	0.99	0.3	228.61	0.1	Vitrified Clay
1736	O2L16SH2	M16H2	4.2	M16H1	-1.9	332.4	0.018	12	0.013	1.06	2.829	2162.4	0.1	
4085	O2L1SP1	M1O1	2	M1P1	4	27.7	0.072	4	0.013	0.99	0.3	229.54	0.1	Vitrified Clay
829	O2L1SI1	M1H1	2.9	M1J1	4.5	192.6	0.008	6	0.013	0.45	0.3	229.64	0.1	Vitrified Clay
962	O2L4SA6	M4F1	4	M4A5	1.8	243	0.009	6	0.013	0.48	0.315	242.34	0.1	Vitrified Clay
4189	O2L34SR1	M34A13	2.1	M34R1	3	16	0.056	4	0.013	0.87	0.263	202.47	0.1	Vitrified Clay
4222	O2L25SG1	M25A1	-1	M25G1	8	237.8	0.038	6	0.013	0.96	0.63	489.09	0.1	Vitrified Clay
1160	O1L14SL2	M14L2	1.5	M14L1	0.1	355.4	0.004	8	0.01	0.49	0.57	445.64	0.1	PVC
1164	O1L14SK2	M14K2	1.6	M14K1	0.6	234.1	0.004	8	0.01	0.49	0.57	446.74	0.1	PVC
4147	O2L1SY1	M1A5	1.1	M1Y1	0	14.6	-0.078	4	0.013	0.01	0.3	238.72	0.1	Vitrified Clay
852	O2L1SOO2	M1OO1	4.5	M1OO2	5	55	0.009	6	0.013	0.47	0.3	240.13	0.1	Vitrified Clay
4171	O2L1SN3	M1M1	2	M1N3	4	24.9	0.08	4	0.013	1.04	0.3	241.96	0.1	Vitrified Clay
846	O2L1SLL1	M1JJ2	2.1	M1LL1	4.5	256.3	0.009	6	0.013	0.47	0.3	242.15	0.1	Vitrified Clay
4131	O2L1SFF1	M1A8	1.9	M1FF1	4	25.8	0.082	4	0.013	1.04	0.3	243.89	0.1	Vitrified Clay
4227	O2L25SH1	M25B1	0.3	M25H1	7	157.1	0.043	6	0.013	1	0.63	521.19	0.1	Vitrified Clay
4089	O2L1SO2	M1O1	2	M1O2	4	23.4	0.085	4	0.013	1.06	0.3	249.44	0.1	Vitrified Clay
4026	O2L4SC1	M4A3	0.7	M4C1	4	283.9	0.012	6	0.013	0.52	0.315	271.11	0.1	Vitrified Clay
1184	O1L14SP1	M14P1	3.8	M14M2	2.2	199.4	0.008	8	0.013	0.53	0.57	493.37	0.1	Vitrified Clay
1281	O2L22SE1	M22E1	2.6	M22B1	1.2	208.3	0.007	6	0.01	0.52	0.315	274.09	0.1	PVC
4173	O2L1SM2	M1M1	2	M1M2	4	21.1	0.095	4	0.013	1.11	0.3	262.71	0.1	Vitrified Clay
720	O2L3SL4	M3L4	4	M3L3	1.7	232.3	0.01	6	0.013	0.47	0.285	250.57	0.1	Vitrified Clay
4187	O2L1SH4	M1H3	3.6	M1H4	4.5	71.6	0.012	6	0.013	0.52	0.3	276.09	0.1	Vitrified Clay
959	O2L4SD2	M4D2	4	M4D1	3.5	37	0.014	6	0.013	0.55	0.315	292.76	0.1	Vitrified Clay
1180	O1L14SO1	M14O1	2.5	M14N1	0.9	135	0.012	6	0.013	0.51	0.285	275.52	0.1	Vitrified Clay
3134	O2L29SC2	M29C2	3	M29C1	2	129.4	0.008	8	0.01	0.64	0.63	619.81	0.1	PVC
615	O2L2SA7	M2A7	3.7	M2A6	2.8	300.7	0.003	8	0.013	0.31	0.3	296.71	0.1	Vitrified Clay

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
612	O2L2SO2	M2O2	3.4	M2O1	2.4	316.4	0.003	8	0.013	0.31	0.3	297.16	0.1	Vitrified Clay
4245	O2L7SK1	M7C1	-0.9	M7K1	3	264.7	0.015	6	0.013	0.56	0.3	305.68	0.1	Vitrified Clay
620	O2L3SE2	M3E2	3.3	M3E1	2.4	300.9	0.003	8	0.013	0.3	0.285	296.62	0.1	Vitrified Clay
616	O2L3SD6	M3D6	3.9	M3D5	2.9	314.4	0.003	8	0.013	0.3	0.285	298.11	0.1	Vitrified Clay
996	O2L34SJ2	M34J2	2.5	M34J1	0.1	194.9	0.012	6	0.013	0.5	0.263	280.02	0.1	Vitrified Clay
3952	O2L29SD1	M29A3	0.2	M29D1	4	421.4	0.009	8	0.01	0.68	0.63	672.56	0.1	PVC
4133	O2L1SGG1	M1A8	1.9	M1GG1	4	14.5	0.144	4	0.013	1.31	0.3	324.64	0.1	Vitrified Clay
724	O2L3SM1	M3L2	0.9	M3M1	4.5	238.9	0.015	6	0.013	0.56	0.285	311.28	0.1	Vitrified Clay
3421	O2L18SG1	M18G1	-0.6	M18A3	-1.6	235.8	0.004	8	0.013	0	0.315	344.22	0.1	Vitrified Clay
3416	O2L18SF1	M18F1	-1.5	M18A2	-2.5	237.8	0.004	8	0.013	0	0.315	344.59	0.1	Vitrified Clay
4315	O2L18A	M18C2	3	M18D1	3.2	41.8	0.004	12	0.013	0.45	0.945	1048.7	0.1	
382	O2L3SG3	M3G3	3.1	M3G2	1.7	393.5	0.004	8	0.013	0.32	0.285	323.48	0.1	Vitrified Clay
817	O2L1SF2	M1F1	2.5	M1F2	4	371.7	0.004	8	0.013	0.34	0.3	342.68	0.1	Vitrified Clay
4257	O2L24SA3	M24A2	-1	M24A3	2	142.3	0.021	6	0.013	0.64	0.315	366.3	0.1	Vitrified Clay
730	O2L3SO1	M3O1	5	M3L1	0.4	255.7	0.018	6	0.013	0.59	0.285	337.04	0.1	Vitrified Clay
1194	O1L14SM5	M14M5	5.7	M14M4	4.3	345	0.004	8	0.013	0.34	0.285	343.01	0.1	Vitrified Clay
3119	O2L29SE1	M29E1	4	M29A2	-0.7	403.4	0.012	8	0.01	0.75	0.63	759.38	0.1	PVC
4253	O2L24SG1	M24A1	-1.6	M24G1	4	59.2	0.094	6	0.013	1.34	0.63	772.83	0.1	Vitrified Clay
4140	O2L1SZ1	M1A6	1.4	M1Z1	4	13.6	0.188	4	0.013	1.45	0.3	370.46	0.1	Vitrified Clay
1178	O1L14SN2	M14N2	2.5	M14N1	0.9	79	0.02	6	0.013	0.62	0.285	360.12	0.1	Vitrified Clay
4191	O2L34SP1	M34A12	1.7	M34P1	4	14.4	0.162	4	0.013	1.32	0.263	343.6	0.1	Vitrified Clay
4251	O2L24SA1	M24D1	-0.9	M24E1	5.4	58.1	0.108	6	0.013	1.42	0.63	829.33	0.1	Vitrified Clay
3142	O2L34SM2	M34N1	3.5	M34M1	2.8	55.5	0.012	6	0.01	0.61	0.263	358.36	0.1	PVC
4204	O2L29SB4	M29B4	2.5	M29B3	2	127.8	0.004	8	0.01	0.4	0.315	440.96	0.1	PVC
4210	O2L25SA7	M25A6	1.9	M25A7	3.5	403.5	0.004	8	0.01	0.4	0.315	443.97	0.1	PVC
3398	O2L25SK1	M25K1	2.4	M25A4	1	345.5	0.004	8	0.01	0.41	0.315	445.62	0.1	PVC
727	O2L3SN1	M3N1	-6.1	M3L1	0.4	241.6	-0.027	6	0.013	0	0.285	413.39	0.1	Vitrified Clay
4236	O2L7SC4	M7C3	0.7	M7N1	4	105.9	0.031	6	0.013	0.73	0.3	444.49	0.1	Vitrified Clay
4263	O2L7SB1	M7A1	-5.5	M7B1	3.6	238.5	0.038	12	0.013	1.25	2.1	3118.3	0.1	
3140	O2L34SM2	M34M2	3.8	M34M1	2.8	56.2	0.017	6	0.01	0.68	0.263	429.13	0.1	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1154	O1L14SJ	M14J4	1.4	M14J3	0.3	245	0.004	8	0.01	0.41	0.285	468.11	0.1	PVC
1146	O1L14SI3	M14I3	1.5	M14I2	0.5	226.4	0.004	8	0.01	0.41	0.285	470.9	0.1	PVC
4116	O2L1SCC1	M1BB2	3	M1CC1	3.5	46.8	0.011	12	0.013	0.63	0.9	1652.3	0.1	
4243	O2L7SL1	M7C2	-0.1	M7L1	6	104.9	0.058	6	0.013	0.9	0.3	607.2	0	Vitrified Clay
4259	O2L24SB1	M24A2	-1	M24B1	3	60.7	0.066	6	0.013	0.95	0.315	647.42	0	
3985	O1L37SD1	M37C2	-1.4	M37D1	5	56.1	0.114	8	0.01	1.92	1.044	2376.2	0	PVC
717	O2L3SK1	M3H3	1.8	M3K1	-5.1	102.4	-0.067	6	0.013	0	0.285	652.28	0	Vitrified Clay
4202	O2L29SA5	M29A4	1.1	M29A5	4.6	254.7	0.014	8	0.01	0.65	0.315	827.15	0	PVC
1200	O1L14SY1	M14Y1	4.8	M14A9	0.4	202.7	0.022	8	0.013	0.57	0.285	800.48	0	Vitrified Clay
1226	O1L14SS6	M14S6	5.8	M14S5	4.7	286.6	0.004	12	0.013	0.31	0.285	1004.1	0	
3424	O2L1SC2	M1C2	4	M1C1	2	292.2	0.007	12	0.013	0.37	0.3	1322.9	0	
3132	O2L29SC1	M29C1	2	M29A1	-1.6	16.4	0.218	8	0.01	1.96	0.63	3292.1	0	PVC
4042	O2L2SH1	M2D4	3	M2H1	3.5	25.7	0.019	12	0.013	0.56	0.3	2230.3	0	
4164	O2L1ST1	M1S2	2.5	M1T1	4	60.1	0.025	12	0.013	0.6	0.3	2526.9	0	
4167	O2L1SS3	M1S2	2.5	M1S3	4	57.6	0.026	12	0.013	0.61	0.3	2580.6	0	
4193	O2L34SQ1	M34A12	1.7	M34Q1	3.8	89	0.024	12	0.013	0.57	0.263	2474.3	0	
354	O1L17SM8	M17M8	4.2	M17M7	3.8	110	0.004	8	0.01	0	0	450.94	0	PVC
635	O2L36SA11	M36A11	2.8	M36A10	1.4	339.1	0.004	8	0.01	0	0	454.65	0	PVC
854	O2L1SMM1	M1MM1	4.5	M1JJ1	1.7	270.1	0.01	6	0.013	0	0	256.58	0	Vitrified Clay
1044	O1L17ST8	M17T8	2.8	M17T7	2.4	88.7	0.004	12	0.013	0	0	1004.2	0	
1051	O1L17SU2	M17U2	-1	M17U1	-2.3	275.1	0.005	12	0.013	0	0	1082.2	0	
1063	O1L17SR1	M17R1	1.8	M17Q0	0.6	400	0.003	8	0.013	0	0	299.51	0	Vitrified Clay
1065	O1L17SR2	M17R2	2.9	M17R1	1.8	268.2	0.004	8	0.013	0	0	342.55	0	Vitrified Clay
1067	O1L17SR3	M17R3	3.6	M17R2	2.9	161.2	0.005	8	0.013	0	0	367.43	0	Vitrified Clay
1074	O1L17SS1	M17S1	-1.4	M17Q2	-3.4	391.3	0.005	8	0.013	0	0	381.87	0	Vitrified Clay
1085	O1L17SG2	M17G2	7	M17G1	4.8	398.5	0.006	8	0.01	0	0	527.42	0	PVC
1683	O2L19SA2	M19A2	1.5	M19A1	1	72.8	0.007	12	0.013	0	0	1324.9	0	Vitrified Clay
1684	O2L19SA1	M19A1	1	W-19	-4.4	16.7	0.321	12	0.013	0	0	9058.2	0	Vitrified Clay
3130	O2L29SG1	M29G1	2.5	M29B2	0	130.4	0.019	6	0.01	0	0	453.23	0	PVC
3983	O2L38SD3	M38D2	0.8	M38D3	1.1	72	0.004	8	0.01	0	0	462.79	0	PVC

Model Gravity Sewer Data Table 50 Unit Per Acre Build Out
Exhibit F1

ID	Label	Start Node	Invert (Start) (ft)	Stop Node	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Dia (in)	Manning's (n)	Vel (ft/s)	Flow (gpm)	Capacity (Full Flow) (gpm)	Flow / Capacity (Design) (%)	Material
1515	O2L46SA1	W-46	2	M46A1	2.4	72.7	-0.006	8	0.01	(N/A)	(N/A)	529.48	(N/A)	PVC

EXHIBIT F.2
SEWER MANHOLE DATA TABLE REPORT

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
67	M17A9	8.5	8.5	16416	0	552.09	11.4	563.49	1.15	1.2	FALSE	TRUE
359	M3A1	6.4	6.4	8964	-1.8	355.85	6.225	362.07	0.69	-1.1	FALSE	TRUE
456	M7A1	6.6	8.3	5184	-5.5	179.72	3.6	183.32	2.15	-3.4	FALSE	TRUE
522	M34A1	6.7	6.7	0	-5.5	1913.6	0	1913.6	0.85	-4.6	FALSE	TRUE
533	M14A2	5.6	7.5	0	-3.6	785.55	0	785.55	2.38	-1.2	FALSE	TRUE
534	M14A3	5.9	5.9	0	-2.6	98.119	0	98.119	1.48	-1.1	FALSE	TRUE
535	M14A4	5.6	5.6	2872.8	-3.1	96.124	1.995	98.119	1.94	-1.1	FALSE	TRUE
598	M3D5	6.8	6.8	3283.2	2.9	0.285	2.28	2.565	1.06	4	FALSE	TRUE
712	M3H5	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
723	M3M1	5.5	5.5	410.4	4.5	0	0.285	0.285	0.01	4.5	FALSE	TRUE
725	M3N1	5.6	5.6	410.4	-6.1	0	0.285	0.285	6.58	0.5	FALSE	TRUE
816	M1F2	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
824	M1B5	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
828	M1J1	6	6	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
832	M1I1	5.8	5.8	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
839	M1KK1	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
843	M1NN1	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
845	M1LL1	6.3	6.3	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
851	M1OO2	6.4	6.4	432	5	0	0.3	0.3	0.01	5	FALSE	TRUE
897	M1D4	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
950	M4C1	5.5	5.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	TRUE
973	M34F2	4.8	4.8	36429.05	0.3	53.617	25.298	78.915	1.75	2	FALSE	TRUE
975	M34F1	4.8	4.8	1890	-0.8	84.69	1.3125	86.002	1.78	1	FALSE	TRUE
977	M34H1	3.4	3.4	4158	-0.2	2.8875	2.8875	5.775	1.25	1	FALSE	TRUE
981	M34H3	4.1	4.1	756	2.5	0	0.525	0.525	0.02	2.5	FALSE	TRUE
985	M34A6	4.3	4.3	31753.4	-1.9	343.28	22.051	365.33	0.71	-1.2	FALSE	TRUE
1056	M17A1	8.6	8.6	41040	-7	898.27	28.5	926.77	0.76	-6.2	FALSE	TRUE
1069	M17Q1	6.7	6.7	0	-4	37.05	0	37.05	4.78	0.8	FALSE	TRUE
1071	M17Q2	7.3	7.3	0	-3.4	37.05	0	37.05	4.2	0.8	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1073	M17S1	7	7	0	-1.4	0	0	0	2.26	0.8	FALSE	TRUE
1080	M17A10	8.7	8.7	6156	0.6	532.85	4.275	537.13	2.15	2.7	FALSE	TRUE
1086	M17A12	9.4	9.4	183654	4	0	127.54	127.54	0.84	4.9	FALSE	TRUE
1087	M17A11	8.9	8.9	32832	1.6	468.01	22.8	490.81	3.18	4.7	FALSE	TRUE
1098	M14C5	7.4	7.4	36936	-0.4	276.4	25.65	302.05	7.65	7.2	FALSE	TRUE
1099	M14D1	5.1	5.1	24624	0.4	142.45	17.1	159.55	4.66	5.1	TRUE	TRUE
1101	M14D2	4.9	4.9	16416	1.3	131.05	11.4	142.45	3.67	4.9	TRUE	TRUE
1103	M14D3	5.7	5.7	4104	2.1	105.4	2.85	108.25	2.93	5.1	FALSE	TRUE
1105	M14D4	6.1	6.1	16416	2.8	94.002	11.4	105.4	2.34	5.1	FALSE	TRUE
1107	M14C4	6.2	6.2	364682	-1.4	302.05	253.25	555.3	7.62	6.2	TRUE	TRUE
1109	M14C3	6.4	6.4	29548.8	-2.3	555.3	20.52	575.82	6.95	4.6	FALSE	TRUE
1112	M14C2	6.4	6.4	0	-2.4	575.82	0	575.82	6.76	4.4	FALSE	TRUE
1114	M14C1	6.4	6.4	0	-2.7	687.43	0	687.43	6	3.3	FALSE	TRUE
1121	M14D5	6.3	6.3	8208	3.5	0	5.7	5.7	1.66	5.1	FALSE	TRUE
1123	M14C6	7.1	7.1	4104	0.5	114	2.85	116.85	6.64	7.1	TRUE	TRUE
1125	M14C7	7.4	7.4	12312	1	102.6	8.55	111.15	6.23	7.2	FALSE	TRUE
1127	M14F1	9.2	9.2	16416	1.8	19.95	11.4	31.35	5.46	7.2	FALSE	TRUE
1129	M14F2	0	7.9	16416	2.5	8.55	11.4	19.95	4.71	7.2	FALSE	TRUE
1147	M14J1	5.4	5.4	2052	-1.9	2.565	1.425	3.99	0.78	-1.1	FALSE	TRUE
1155	M14A5	5.2	5.2	7797.6	-2.4	83.584	5.415	88.999	1.29	-1.1	FALSE	TRUE
1171	M14A7	6.4	6.4	6885.6	-1.6	71.393	4.7817	76.174	1.41	-0.2	FALSE	TRUE
1270	M22F1	4.7	4.7	143100	-1.8	0	99.375	99.375	1.79	0	FALSE	TRUE
1274	M22A2	4.8	4.8	20412	-0.8	446.34	14.175	460.51	0.88	0.1	FALSE	TRUE
1284	M22A5	5.4	5.4	240786	2.2	0	167.21	167.21	0.31	2.5	FALSE	TRUE
1288	M26A2	5	5	907.2	2.7	0	0.63	0.63	-0.03	2.7	FALSE	TRUE
1303	M14C8	8.1	8.1	0	1.3	71.25	0	71.25	5.94	7.2	FALSE	TRUE
1305	M14C9	7.3	7.3	53352	1.7	34.2	37.05	71.25	5.49	7.2	FALSE	TRUE
1307	M14C10	7.6	7.6	10260	2.6	7.125	7.125	14.25	4.67	7.2	FALSE	TRUE
1309	M14C11	8.2	8.2	10260	3.1	0	7.125	7.125	4.13	7.2	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1311	M14G1	8	8	16416	2.4	8.55	11.4	19.95	4.79	7.2	FALSE	TRUE
1313	M14G2	8.2	8.2	12312	3.3	0	8.55	8.55	3.97	7.2	FALSE	TRUE
1332	M40A5	9.2	9.2	126831.6	3.7	0	88.078	88.078	0.2	3.9	FALSE	TRUE
1334	M40B2	8	8	3528	4	0	2.45	2.45	-2.03	2	FALSE	TRUE
1386	M37D1	8.1	8.1	1503.6	5	0	1.0442	1.0442	0.02	5	FALSE	TRUE
1393	M17B1	8.8	8.8	0	2.2	210.19	0	210.19	2.56	4.7	FALSE	TRUE
1395	M17B2	9	9	0	2.6	210.19	0	210.19	2.25	4.8	FALSE	TRUE
1397	M17B3	8	8	32832	3.4	187.39	22.8	210.19	1.52	5	FALSE	TRUE
1399	M17C1	7.7	7.7	16416	3.7	0	11.4	11.4	1.25	5	FALSE	TRUE
1401	M17B4	8.1	8.1	0	4	175.99	0	175.99	1.06	5.1	FALSE	TRUE
1464	M34A9	4.4	4.4	3402	0.1	215.54	2.3625	217.91	0.65	0.7	FALSE	TRUE
1476	M39A1	5.9	5.9	22680.42	-1.6	15.75	15.75	31.501	3.6	2	FALSE	TRUE
1480	M39A2	5.9	5.9	22680.42	-0.3	0	15.75	15.75	2.25	2	FALSE	TRUE
1493	M18A-A2	5.1	5.1	0	-0.7	76.004	0	76.004	1.39	0.7	FALSE	TRUE
1495	M18A-A3	5.6	5.6	7257.6	-0.3	70.964	5.04	76.004	0.99	0.7	FALSE	TRUE
1516	M34A3	5.1	5.1	16068.5	-4.4	634.04	11.159	645.2	0.78	-3.6	FALSE	TRUE
1550	M17F1	9.1	9.1	32832	2.8	107.49	22.8	130.29	2.11	4.9	FALSE	TRUE
1552	M17F2	8.9	8.9	0	3.9	107.49	0	107.49	1.1	5	FALSE	TRUE
1554	M17F3	10.9	10.9	70178.4	4	58.754	48.735	107.49	1	5	FALSE	TRUE
1560	M14H1	5.6	5.6	8208	3	17.1	5.7	22.8	1.99	4.9	FALSE	TRUE
1562	M14H2	5.6	5.6	0	3.4	17.1	0	17.1	1.52	4.9	FALSE	TRUE
1564	M14H3	5.6	5.6	4104	3.8	14.25	2.85	17.1	1.15	4.9	FALSE	TRUE
1566	M14H4	5.9	5.9	12312	4.2	5.7	8.55	14.25	0.73	4.9	FALSE	TRUE
1618	M3F3	5.9	5.9	0	3.2	132.9	0	132.9	0.29	3.5	FALSE	TRUE
1707	M38C2	7	7	20071.38	1	0	13.938	13.938	0.07	1.1	FALSE	TRUE
1715	M38B3	7.1	7.1	19609.59	1.5	0	13.618	13.618	0.08	1.6	FALSE	TRUE
3154	M30L1	4.2	4.2	453.6	3.8	0	0.315	0.315	0.02	3.8	FALSE	TRUE
3197	M18A1	5.6	5.6	3628.8	-3.1	132.03	2.52	134.55	4.11	1	FALSE	TRUE
3199	M18B2	5	5	11340	-1.6	0	7.875	7.875	2.57	1	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3223	M18B1	5.1	5.1	10886.4	-2.4	7.875	7.56	15.435	3.4	1	FALSE	TRUE
3303	M24A1	6	6	3628.8	-1.6	6.93	2.52	9.45	0.68	-0.9	FALSE	TRUE
3401	M18A5	6.9	6.9	907.2	0.3	0	0.63	0.63	0.72	1	FALSE	TRUE
3402	M18A4	6.3	6.3	7257.6	-0.9	0.63	5.04	5.67	1.93	1	FALSE	TRUE
3404	M18A2	5.4	5.4	10886.4	-2.5	17.01	7.56	24.57	3.48	1	FALSE	TRUE
3407	M18E2	7.1	7.1	4536	-0.6	0.63	3.15	3.78	1.65	1	FALSE	TRUE
3409	M18E1	6.2	6.2	7257.6	-1.8	3.78	5.04	8.82	2.78	1	FALSE	TRUE
3415	M18F1	6.9	6.9	453.6	-1.5	0	0.315	0.315	2.52	1	FALSE	TRUE
3417	M18A3	5.9	5.9	2721.6	-1.6	5.985	1.89	7.875	2.59	1	FALSE	TRUE
3420	M18G1	6.5	6.5	453.6	-0.6	0	0.315	0.315	1.64	1	FALSE	TRUE
3517	M35B1	6.5	6.5	29716.26	2	0	20.636	20.636	0.1	2.1	FALSE	TRUE
3519	M35C1	6	6	4776.24	0	0	3.3168	3.3168	0.04	0	FALSE	TRUE
3911	M7A7	7.9	7.9	432	6.1	0	0.3	0.3	0.02	6.1	FALSE	TRUE
3951	M29D1	5.1	5.1	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE
3980	M15A1	7	7	9702	4.5	0	6.7375	6.7375	0.06	4.6	FALSE	TRUE
3991	M35A4	6.6	6.6	27561.66	3.6	0	19.14	19.14	0.1	3.7	FALSE	TRUE
4003	M13A2	6.2	6.2	4800.6	4.5	0	3.3337	3.3337	0.05	4.5	FALSE	TRUE
4005	M10A2	9.3	9.3	672	6	0	0.46667	0.46667	0.02	6	FALSE	TRUE
4008	M9A2	5.1	5.1	28350	1.1	0	19.688	19.688	0.09	1.2	FALSE	TRUE
4013	M9B2	5.3	5.3	34020	1.5	0	23.625	23.625	0.11	1.6	FALSE	TRUE
4035	M3B5	5	5	410.4	4.4	0	0.285	0.285	0.01	4.4	FALSE	TRUE
4037	M3C1	5.7	5.7	410.4	4	0	0.285	0.285	0.01	4	FALSE	TRUE
4039	M2D5	5.3	5.3	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4043	M2G1	5.6	5.6	432	2.8	0	0.3	0.3	0.02	2.9	FALSE	TRUE
4051	M2R4	6.2	6.2	432	4.7	0	0.3	0.3	0.02	4.7	FALSE	TRUE
4053	M2S1	6.1	6.1	432	4.7	0	0.3	0.3	0.01	4.8	FALSE	TRUE
4058	M2T2	6.1	6.1	432	4.2	0	0.3	0.3	0.01	4.2	FALSE	TRUE
4060	M2U1	6.2	6.2	432	3.5	0	0.3	0.3	0.01	3.6	FALSE	TRUE
4067	M2P3	6.1	6.1	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4069	M2Q1	6.9	6.9	432	1.9	0	0.3	0.3	0.02	1.9	FALSE	TRUE
4073	M2J3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4075	M2K1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4077	M2B4	5.5	5.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4084	M1P1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4088	M1O2	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4092	M1Q2	5.3	5.3	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	TRUE
4094	M1R1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4099	M1II1	5.8	5.8	432	5	0	0.3	0.3	0.02	5	FALSE	TRUE
4101	M1HH2	5.7	5.7	432	5.2	0	0.3	0.3	0.01	5.2	FALSE	TRUE
4108	M1KK2	6.5	6.5	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	TRUE
4113	M1BB4	5.6	5.6	432	5.1	0	0.3	0.3	0.01	5.1	FALSE	TRUE
4117	M1CC2	6	6	432	4	0	0.3	0.3	0.02	4	FALSE	TRUE
4119	M1DD1	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4123	M1EE2	6.1	6.1	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4125	M1EE3	6	6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4130	M1FF1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4132	M1GG1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4134	M1A6	6.5	6.5	432	1.4	192	0.29999	192.3	0.36	1.8	FALSE	TRUE
4137	M1AA1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4139	M1Z1	6.5	6.5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4141	M1A5	6.5	6.5	432	1.1	192.9	0.3	193.2	0.36	1.5	FALSE	TRUE
4144	M1X1	6.3	6.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4146	M1Y1	6.8	6.8	432	0	0	0.3	0.3	1.5	1.5	FALSE	TRUE
4150	M1U3	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4154	M1V2	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4156	M1W1	6.4	6.4	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4163	M1T1	5.6	5.6	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4166	M1S3	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4170	M1N3	5.3	5.3	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4172	M1M2	5	5	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4176	M1L1	5.1	5.1	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4178	M1K2	5.8	5.8	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4186	M1H4	6.2	6.2	432	4.5	0	0.3	0.3	0.01	4.5	FALSE	TRUE
4188	M34R1	4.4	4.4	378	3	0	0.2625	0.2625	0.01	3	FALSE	TRUE
4190	M34P1	4.8	4.8	378	4	0	0.2625	0.2625	0.01	4	FALSE	TRUE
4192	M34Q1	4.3	4.3	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4194	M34S1	4.7	4.7	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	TRUE
4201	M29A5	5.6	5.6	453.6	4.6	0	0.315	0.315	0.01	4.6	FALSE	TRUE
4209	M25A7	4.1	4.1	453.6	3.5	0	0.315	0.315	0.01	3.5	FALSE	TRUE
4211	M25C2	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4213	M25D1	4.3	4.3	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	TRUE
4215	M25E1	5.3	5.3	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4219	M25F1	4.7	4.7	907.2	2	0	0.63	0.63	0.02	2	FALSE	TRUE
4221	M25G1	10	10	907.2	8	0	0.63	0.63	0.02	8	FALSE	TRUE
4223	M25I1	5.2	5.2	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4226	M25H1	10	10	907.2	7	0	0.63	0.63	0.02	7	FALSE	TRUE
4228	M25J1	5.2	5.2	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4231	M25B3	7.3	7.3	907.2	5	0	0.63	0.63	0.02	5	FALSE	TRUE
4233	M7C4	4.5	4.5	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4235	M7N1	8.2	8.2	432	4	0	0.3	0.3	0.01	4	FALSE	TRUE
4237	M7M1	4.8	4.8	1728	3	0	1.2	1.2	0.03	3	FALSE	TRUE
4240	M7L1	9.9	9.9	432	6	0	0.3	0.3	0.01	6	FALSE	TRUE
4244	M7K1	5.3	5.3	432	3	0	0.3	0.3	0.01	3	FALSE	TRUE
4246	M7J1	8.4	8.4	1728	4	0	1.2	1.2	0.03	4	FALSE	TRUE
4248	M24D2	5.7	5.7	907.2	3.7	0	0.63	0.63	0.02	3.7	FALSE	TRUE
4250	M24E1	8.4	8.4	907.2	5.4	0	0.63	0.63	0.02	5.4	FALSE	TRUE
4252	M24G1	6.8	6.8	907.2	4	0	0.63	0.63	0.02	4	FALSE	TRUE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4254	M24H1	5	5	907.2	3	0	0.63	0.63	0.02	3	FALSE	TRUE
4256	M24A3	4.9	4.9	453.6	2	0	0.315	0.315	0.01	2	FALSE	TRUE
4258	M24B1	5.6	5.6	453.6	3	0	0.315	0.315	0.01	3	FALSE	TRUE
4266	M37A5	5	5	1503.6	3	0	1.0442	1.0442	0.02	3	FALSE	TRUE
4268	M14F3	8.3	8.3	12312	3	0	8.55	8.55	4.22	7.2	FALSE	TRUE
4270	M4G3	9	9	4309.2	6.2	0	2.9925	2.9925	0.04	6.2	FALSE	TRUE
4272	M32C2	5.2	5.2	19879.02	1	0	13.805	13.805	0.09	1.1	FALSE	TRUE
4286	M14E1	8	8	4104	4.8	0	2.85	2.85	2.3	7.1	FALSE	TRUE
4386	M32B2	6	6	12526.5	3	0	8.699	8.699	0.07	3.1	FALSE	TRUE
4414	M30G1	3.4	3.4	1360.8	2	0	0.945	0.945	0.02	2	FALSE	TRUE
4419	M30D1	3.5	3.5	2721.6	2	0	1.89	1.89	0.03	2	FALSE	TRUE
4427	M16C1	4.7	4.7	11340	2.2	0	7.875	7.875	0.06	2.3	FALSE	TRUE
4454	M38A8	10.3	10.3	2469.6	7	0	1.715	1.715	0.03	7	FALSE	TRUE
68	M17J1	8.8	8.8	16416	3.7	3.5625	11.4	14.962	0.09	3.8	FALSE	FALSE
222	M17K1	9.3	9.3	2052	5.6	0	1.425	1.425	0.03	5.6	FALSE	FALSE
226	M17J2	8.8	8.8	1026	4.8	2.85	0.7125	3.5625	0.04	4.8	FALSE	FALSE
227	M17J3	9.2	9.2	2052	5.2	0	1.425	1.425	0.03	5.2	FALSE	FALSE
352	M17M8	7.2	7.2	0	4.2	0	0	0	0	4.2	FALSE	FALSE
353	M17M7	7	7	16416	3.8	0	11.4	11.4	0.07	3.8	FALSE	FALSE
375	M3A2	6.2	6.2	11080.8	-1.3	195.87	7.695	203.57	0.36	-0.9	FALSE	FALSE
377	M3G1	6.1	6.1	4514.4	0.2	2.85	3.135	5.985	0.06	0.3	FALSE	FALSE
379	M3G2	6.2	6.2	3693.6	1.7	0.285	2.565	2.85	0.04	1.7	FALSE	FALSE
381	M3G3	6.4	6.4	410.4	3.1	0	0.285	0.285	0.01	3.1	FALSE	FALSE
384	M17A1	4.4	4.4	18900	0.3	45.5	13.125	58.625	0.15	0.5	FALSE	FALSE
403	M1A1	7.2	7.2	1728	-1	269.25	1.2	270.45	0.34	-0.7	FALSE	FALSE
418	M2A1	5.8	5.8	432	-2.1	64.2	0.3	64.5	0.23	-1.9	FALSE	FALSE
424	M3J1	5.4	5.4	820.8	3	161.96	0.57	162.53	0.28	3.3	FALSE	FALSE
451	M1A9	6.3	6.3	1728	3	185.1	1.2	186.3	0.28	3.3	FALSE	FALSE
523	M34A2	5.7	5.7	20709.15	-4.6	679.62	14.381	694	0.53	-4.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
530	M14A1	6.3	6.3	0	-4	877.46	0	877.46	0.63	-3.3	FALSE	FALSE
545	M7B1	8.4	8.4	2592	3.6	0.3	1.8	2.1	0.03	3.6	FALSE	FALSE
546	M7B2	7.7	7.7	432	4.9	0	0.3	0.3	0.02	4.9	FALSE	FALSE
549	M7A3	6.1	6.1	3888	-0.6	62.933	2.7	65.633	0.19	-0.4	FALSE	FALSE
550	M7D1	6	6	15552	1	45.533	10.8	56.333	0.18	1.2	FALSE	FALSE
551	M7D2	6	6	15552	1.8	28.733	10.8	39.533	0.16	2	FALSE	FALSE
552	M7D3	6.7	6.7	13824	2.7	13.133	9.6	22.733	0.12	2.8	FALSE	FALSE
553	M7E1	7.7	7.7	11136	4.9	0	7.7333	7.7333	0.07	5	FALSE	FALSE
554	M7H1	6.7	6.7	864	4.7	0	0.6	0.6	0.02	4.7	FALSE	FALSE
555	M7I2	6.1	6.1	864	4.6	0	0.6	0.6	0.02	4.6	FALSE	FALSE
559	M7D4	7.4	7.4	6912	4.4	0.6	4.8	5.4	0.06	4.5	FALSE	FALSE
560	M7G2	7.1	7.1	864	5.6	0	0.6	0.6	0.02	5.6	FALSE	FALSE
561	M7F2	7.7	7.7	864	5.8	0	0.6	0.6	0.02	5.8	FALSE	FALSE
564	M7A6	8	8	2592	4.9	0.3	1.8	2.1	0.04	5	FALSE	FALSE
565	M7D5	7.7	7.7	864	6.1	0	0.6	0.6	0.02	6.1	FALSE	FALSE
580	M7A5	7.7	7.7	3024	3.3	2.1	2.1	4.2	0.05	3.3	FALSE	FALSE
583	M7A4	6.6	6.6	3456	1.3	4.2	2.4	6.6	0.06	1.4	FALSE	FALSE
587	M7A2	6.1	6.1	3456	-2	65.633	2.4	68.033	0.19	-1.8	FALSE	FALSE
590	M7G1	6.3	6.3	6912	3.9	0.6	4.8	5.4	0.05	4	FALSE	FALSE
593	M7F1	6.5	6.5	6912	4.1	0.6	4.8	5.4	0.06	4.2	FALSE	FALSE
596	M3D4	6.7	7.5	3283.2	2	2.565	2.28	4.845	0.05	2	FALSE	FALSE
597	M3D3	6.6	6.6	2052	1.5	7.41	1.425	8.835	0.08	1.6	FALSE	FALSE
599	M3D6	6.3	6.3	410.4	3.9	0	0.285	0.285	0.11	4	FALSE	FALSE
600	M2A7	6.4	6.4	432	3.7	0	0.3	0.3	0.02	3.8	FALSE	FALSE
601	M3E1	5.4	5.4	3283.2	2.4	0.285	2.28	2.565	0.04	2.5	FALSE	FALSE
602	M3E2	5.3	5.3	410.4	3.3	0	0.285	0.285	0.02	3.3	FALSE	FALSE
603	M2O2	6.1	6.1	432	3.4	0	0.3	0.3	0.02	3.4	FALSE	FALSE
604	M2A6	6.3	6.3	3024	2.8	0.3	2.1	2.4	0.04	2.9	FALSE	FALSE
605	M2O1	6.1	6.1	3456	2.4	0.3	2.4	2.7	0.05	2.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
606	M2A4	7.3	7.3	3024	1.5	7.5	2.1	9.6	0.08	1.5	FALSE	FALSE
607	M2A5	7.3	7.3	3456	1.9	2.4	2.4	4.8	0.06	2	FALSE	FALSE
608	M2A3	7.1	7.1	3888	0.3	12.9	2.7	15.6	0.08	0.3	FALSE	FALSE
622	M36A11	5.8	5.8	0	2.8	0	0	0	0	2.8	FALSE	FALSE
623	M36A10	5.9	5.9	11970	1.4	0	8.3125	8.3125	0.06	1.5	FALSE	FALSE
624	M36A9	5.7	5.7	11970	1	8.3125	8.3125	16.625	0.09	1.1	FALSE	FALSE
625	M36A8	5.9	5.9	23276.4	0.2	40.18	16.164	56.344	0.17	0.4	FALSE	FALSE
627	M36A6	5.8	5.8	23276.4	-1.7	72.508	16.164	88.673	0.21	-1.4	FALSE	FALSE
628	M36A5	6.4	6.4	23276.4	-2	88.673	16.164	104.84	0.23	-1.7	FALSE	FALSE
629	M36A4	5.9	5.9	11306.4	-2.2	104.84	7.8517	112.69	0.34	-1.9	FALSE	FALSE
630	M36A3	6.1	6.1	24924.06	-2.4	131.6	17.308	148.91	0.27	-2.2	FALSE	FALSE
631	M36E1	7.1	7.1	13617.66	2.2	9.4567	9.4567	18.913	0.09	2.3	FALSE	FALSE
632	M36H1	8.8	8.8	11306.4	3	15.703	7.8517	23.555	0.1	3.1	FALSE	FALSE
633	M36H2	9.3	9.3	11306.4	5.1	7.8517	7.8517	15.703	0.08	5.2	FALSE	FALSE
634	M36H3	9.4	9.4	11306.4	6	0	7.8517	7.8517	0.06	6.1	FALSE	FALSE
641	M36A7	5.6	5.6	23276.4	-0.7	56.344	16.164	72.508	0.19	-0.5	FALSE	FALSE
648	M36E2	7.1	7.1	13617.66	6	0	9.4567	9.4567	0.07	6.1	FALSE	FALSE
650	M36A2	6.2	6.2	11306.4	-4.1	148.91	7.8517	156.76	0.28	-3.8	FALSE	FALSE
652	M36A1	5.8	5.8	76461.84	-5.2	420.64	53.098	473.73	0.43	-4.7	FALSE	FALSE
654	M36B1	6.5	6.5	50449.56	-4	228.84	35.034	263.87	0.37	-3.6	FALSE	FALSE
656	M36C2	5.3	7.9	15466.92	-0.5	69.331	10.741	80.072	0.19	-0.3	FALSE	FALSE
658	M36C3	8.2	8.2	33278.7	3.9	46.221	23.11	69.331	0.18	4.1	FALSE	FALSE
660	M36C4	8.6	8.6	15466.92	5.1	10.741	10.741	21.482	0.1	5.1	FALSE	FALSE
662	M36C5	8.5	10.4	15466.92	6	0	10.741	10.741	0.07	6.1	FALSE	FALSE
664	M36G2	8.9	8.9	17812.2	6	0	12.37	12.37	0.08	6.1	FALSE	FALSE
665	M36G1	8.8	8.8	17811.78	5	12.37	12.369	24.739	0.12	5.1	FALSE	FALSE
668	M36D2	6	6	0	1.9	29.802	0	29.802	0.13	2.1	FALSE	FALSE
670	M36D3	5.9	5.9	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
672	M36F1	5.5	5.5	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
674	M36B6	5.7	5.7	21457.8	3	0	14.901	14.901	0.08	3.1	FALSE	FALSE
675	M36B5	6.5	6.5	0	2.1	14.901	0	14.901	0.08	2.1	FALSE	FALSE
677	M36B3	6.4	8.3	3439.8	-0.1	70.801	2.3888	73.19	0.18	0.1	FALSE	FALSE
679	M36I1	7.1	8.2	2192.4	1.5	41.077	1.5225	42.6	0.14	1.6	FALSE	FALSE
681	M36B2	6.3	6.3	50449.56	-3	73.19	35.034	108.22	0.24	-2.7	FALSE	FALSE
684	M36C1	8.3	8.3	15466.5	-2	80.072	10.741	90.812	0.21	-1.8	FALSE	FALSE
687	M36D1	8.3	8.3	0	1	29.802	0	29.802	0.12	1.1	FALSE	FALSE
690	M36B4	8	8	19152	0.5	14.901	13.3	28.201	0.12	0.7	FALSE	FALSE
693	M17A8	8.4	8.4	0	-2.1	608.53	0	608.53	0.49	-1.6	FALSE	FALSE
694	M17L1	7.7	10.5	0	0.9	45.041	0	45.041	0.14	1	FALSE	FALSE
696	M17L2	8.3	8.3	0	1.2	45.041	0	45.041	0.14	1.3	FALSE	FALSE
698	M17L3	6.7	6.7	10260	1.8	37.916	7.125	45.041	0.14	1.9	FALSE	FALSE
700	M17L4	7.6	7.6	16416	2.3	26.516	11.4	37.916	0.13	2.5	FALSE	FALSE
702	M17L5	7	7	16416	3.6	15.116	11.4	26.516	0.11	3.7	FALSE	FALSE
704	M17L6	7.2	7.2	21766.4	4	0	15.116	15.116	0.08	4.1	FALSE	FALSE
706	M3H2	5.4	5.4	2872.8	1.3	165.66	1.995	167.66	0.34	1.6	FALSE	FALSE
708	M3H3	5.5	5.5	2052	1.8	1.71	1.425	3.135	0.05	1.8	FALSE	FALSE
710	M3H4	4.9	4.9	1231.2	2.5	0.285	0.855	1.14	0.03	2.5	FALSE	FALSE
714	M3I1	5.6	5.6	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
716	M3K1	5.8	5.8	410.4	-5.1	0	0.285	0.285	6.92	1.8	FALSE	FALSE
718	M3L4	5.2	5.2	410.4	4	0	0.285	0.285	0.01	4	FALSE	FALSE
719	M3L3	3.9	3.9	2462.4	1.7	0.285	1.71	1.995	0.03	1.7	FALSE	FALSE
721	M3L2	5.7	5.7	2052	0.9	2.28	1.425	3.705	0.05	0.9	FALSE	FALSE
726	M3L1	5.9	5.9	4514.4	0.4	4.275	3.135	7.41	0.07	0.5	FALSE	FALSE
729	M3O1	6.3	6.3	410.4	5	0	0.285	0.285	0.01	5	FALSE	FALSE
731	M3H1	5.1	5.1	3693.6	-0.1	175.07	2.565	177.63	0.35	0.2	FALSE	FALSE
734	M3A3	6.1	6.1	2462.4	0.4	10.545	1.71	12.255	0.09	0.5	FALSE	FALSE
741	M3A4	5.8	5.8	2462.4	1.4	8.835	1.71	10.545	0.08	1.5	FALSE	FALSE
743	M3C2	5.6	5.6	410.4	2	0	0.285	0.285	0.02	2	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
749	M3A9	5.3	5.3	410.4	5	0	0.285	0.285	0.21	5.2	FALSE	FALSE
750	M3A8	5.4	5.4	820.8	4.3	0.285	0.57	0.855	0.03	4.3	FALSE	FALSE
752	M3A7	5.5	5.5	1641.6	3.5	0.855	1.14	1.995	0.04	3.6	FALSE	FALSE
754	M3A6	5.3	5.3	1231.2	2.9	1.995	0.855	2.85	0.05	2.9	FALSE	FALSE
756	M3A5	6.4	6.4	2872.8	1.7	2.85	1.995	4.845	0.06	1.8	FALSE	FALSE
760	M2B3	5.6	5.6	864	3	0.3	0.6	0.9	0.02	3	FALSE	FALSE
761	M2B2	5.9	5.9	1296	2	0.9	0.9	1.8	0.03	2	FALSE	FALSE
763	M2B1	5.9	5.9	1728	1	1.8	1.2	3	0.04	1	FALSE	FALSE
765	M2A2	6.2	6.2	6912	-1.3	33.9	4.8	38.7	0.15	-1.1	FALSE	FALSE
768	M2J1	6.1	6.1	1296	0.1	2.4	0.9	3.3	0.25	0.4	FALSE	FALSE
770	M2L1	5.7	5.7	864	0.6	0.6	0.6	1.2	0.03	0.7	FALSE	FALSE
772	M2M1	5.9	5.9	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
776	M2L2	6	6	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
778	M2N1	6.1	6.1	432	0.9	0	0.3	0.3	0.02	0.9	FALSE	FALSE
780	M2I1	6	6	864	4	0	0.6	0.6	0.02	4	FALSE	FALSE
781	M2D4	5.5	5.5	3888	3	1.2	2.7	3.9	0.05	3.1	FALSE	FALSE
783	M2D3	5.4	5.4	3456	1.5	3.9	2.4	6.3	0.06	1.6	FALSE	FALSE
785	M2D2	5.4	5.4	2592	0	6.3	1.8	8.1	0.06	0.1	FALSE	FALSE
787	M2D1	5.8	5.8	5184	-1.7	9.3	3.6	12.9	0.08	-1.6	FALSE	FALSE
789	M2E1	5.9	5.9	1296	2	0.3	0.9	1.2	0.03	2	FALSE	FALSE
791	M2E2	5.8	5.8	432	3	0	0.3	0.3	0.01	3	FALSE	FALSE
795	M2C1	5.8	5.8	5184	-1.8	9	3.6	12.6	0.08	-1.7	FALSE	FALSE
797	M2F1	5.7	5.7	2160	0.4	2.1	1.5	3.6	0.05	0.4	FALSE	FALSE
799	M2F2	5.8	5.8	2160	2.1	0.6	1.5	2.1	0.04	2.1	FALSE	FALSE
801	M2F3	6.1	6.1	432	2.6	0	0.3	0.3	0.02	2.6	FALSE	FALSE
803	M2C2	5.6	5.6	4752	-1.3	2.1	3.3	5.4	0.06	-1.3	FALSE	FALSE
805	M2C3	5.7	5.7	2592	0.9	0.3	1.8	2.1	0.04	0.9	FALSE	FALSE
807	M2C4	5.3	5.3	432	2.3	0	0.3	0.3	0.02	2.3	FALSE	FALSE
809	M2R1	5.7	5.7	3888	1.8	5.4	2.7	8.1	0.07	1.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
811	M2R2	5.8	5.8	432	3.2	2.4	0.3	2.7	0.04	3.3	FALSE	FALSE
813	M1G1	5.8	5.8	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
814	M1F1	6.1	6.1	5184	2.5	0.6	3.6	4.2	0.05	2.6	FALSE	FALSE
818	M1B2	6	6	4320	1.2	10.8	3	13.8	0.09	1.2	FALSE	FALSE
820	M1B3	5.9	5.9	1296	2.4	5.7	0.9	6.6	0.06	2.4	FALSE	FALSE
822	M1B4	5.6	5.6	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE
826	M1H1	5.8	5.8	2160	2.9	3	1.5	4.5	0.05	2.9	FALSE	FALSE
830	M1H2	5.9	5.9	2160	3.3	1.2	1.5	2.7	0.04	3.3	FALSE	FALSE
834	M1H3	6.1	6.1	864	3.6	0.3	0.6	0.9	0.03	3.7	FALSE	FALSE
836	M1JJ4	6	6	432	4.5	0	0.3	0.3	0.02	4.5	FALSE	FALSE
837	M1JJ3	6.1	6.1	6480	2.7	0.6	4.5	5.1	0.05	2.7	FALSE	FALSE
841	M1JJ2	6.3	6.3	6480	2.1	5.7	4.5	10.2	0.08	2.2	FALSE	FALSE
847	M1JJ1	6.6	6.6	6912	1.7	11.1	4.8	15.9	0.1	1.8	FALSE	FALSE
849	M1OO1	6.3	6.3	864	4.5	0.3	0.6	0.9	0.02	4.5	FALSE	FALSE
853	M1MM1	6.2	6.2	0	4.5	0	0	0	0	4.5	FALSE	FALSE
855	M1D2	6.7	6.7	4320	0.9	16.5	3	19.5	0.11	1	FALSE	FALSE
858	M1B1	6.5	6.5	6912	-0.4	13.8	4.8	18.6	0.1	-0.3	FALSE	FALSE
861	M1E4	6.6	6.6	27000	3	0	18.75	18.75	0.1	3.1	FALSE	FALSE
862	M1E3	5.7	5.7	0	1.5	18.75	0	18.75	0.11	1.6	FALSE	FALSE
864	M1E2	5.4	5.4	1296	0.7	20.55	0.9	21.45	0.11	0.8	FALSE	FALSE
866	M1E1	6.3	6.3	1728	-0.3	22.05	1.2	23.25	0.11	-0.1	FALSE	FALSE
868	M1A2	6.4	6.4	2592	-0.8	223.35	1.8	225.15	0.37	-0.4	FALSE	FALSE
871	M1A4	6.5	6.5	0	1	196.2	0	196.2	0.35	1.3	FALSE	FALSE
882	M1U1	6.1	6.1	0	2.6	1.8	0	1.8	0.03	2.6	FALSE	FALSE
884	M1A7	6.5	6.5	0	1.7	191.4	0	191.4	0.31	2	FALSE	FALSE
886	M1BB2	5.9	5.9	0	3	1.5	0	1.5	0.03	3	FALSE	FALSE
891	M1A10	6.7	6.7	32400	4.3	6.25	22.5	28.75	0.12	4.4	FALSE	FALSE
893	M1A11	8.2	8.2	9000	4.8	0	6.25	6.25	1.64	6.4	FALSE	FALSE
899	M23B2	6.9	6.9	5460	3.5	0	3.7917	3.7917	0.05	3.6	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
900	M23B1	5.4	5.4	56700	1.9	3.7917	39.375	43.167	0.27	2.2	FALSE	FALSE
903	M17A2	6.1	7.8	3360	2.1	0	2.3333	2.3333	0.04	2.2	FALSE	FALSE
905	M5B2	6	6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
906	M5B1	6.4	6.4	3175.2	3	0.315	2.205	2.52	0.04	3	FALSE	FALSE
908	M5A3	6.2	6.2	7711.2	-2.4	13.23	5.355	18.585	0.09	-2.3	FALSE	FALSE
910	M5A2	6	6	4536	-2.7	29.295	3.15	32.445	0.13	-2.5	FALSE	FALSE
913	M5C1	6.4	6.4	3175.2	2	0.315	2.205	2.52	0.04	2	FALSE	FALSE
915	M5C2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
921	M5D3	6.3	6.3	4082.4	0.7	5.04	2.835	7.875	0.07	0.8	FALSE	FALSE
923	M5A4	6	6	3628.8	-0.7	8.19	2.52	10.71	0.08	-0.6	FALSE	FALSE
925	M5A6	5.8	5.8	3628.8	0.5	5.67	2.52	8.19	0.07	0.6	FALSE	FALSE
927	M5A7	6.5	6.5	3628.8	1.8	3.15	2.52	5.67	0.06	1.9	FALSE	FALSE
929	M5A8	6.3	6.3	4082.4	3.1	0.315	2.835	3.15	0.05	3.1	FALSE	FALSE
931	M5D4	6	6	3175.2	2.2	2.835	2.205	5.04	0.06	2.3	FALSE	FALSE
933	M5D5	6.3	6.3	3628.8	3.4	0.315	2.52	2.835	0.04	3.4	FALSE	FALSE
935	M5A9	5.8	5.8	453.6	4.5	0	0.315	0.315	0.02	4.5	FALSE	FALSE
937	M5D6	5.8	5.8	453.6	4.6	0	0.315	0.315	0.02	4.6	FALSE	FALSE
939	M4H2	5.9	5.9	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
940	M4H1	6.4	6.4	4082.4	2.5	0.315	2.835	3.15	0.04	2.5	FALSE	FALSE
944	M4A3	6.7	6.7	7257.6	0.7	17.325	5.04	22.365	0.12	0.8	FALSE	FALSE
946	M4B1	6.1	6.1	4536	2.5	0.315	3.15	3.465	0.05	2.5	FALSE	FALSE
948	M4B2	6.3	6.3	453.6	4.3	0	0.315	0.315	0.02	4.3	FALSE	FALSE
952	M4A4	6.7	6.7	7257.6	1.2	8.505	5.04	13.545	0.1	1.3	FALSE	FALSE
954	M4D1	6.5	6.5	907.2	3.5	0.63	0.63	1.26	0.03	3.5	FALSE	FALSE
956	M4E1	6.4	6.4	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
958	M4D2	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
960	M4F1	6.5	6.5	453.6	4	0	0.315	0.315	0.01	4	FALSE	FALSE
961	M4A5	6.7	6.7	9525.6	1.8	0.63	6.615	7.245	0.07	1.8	FALSE	FALSE
964	M4G1	7.6	7.6	4536	3	3.6225	3.15	6.7725	0.06	3.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
966	M4G2	7.4	7.4	907.2	5.4	2.9925	0.63	3.6225	0.05	5.4	FALSE	FALSE
968	M4A6	7.2	7.2	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
970	M34F4	4.4	4.4	6171.9	1.8	0	4.286	4.286	1.63	3.5	FALSE	FALSE
971	M34F3	4.8	4.8	2646	1.2	4.286	1.8375	6.1235	1.65	2.8	FALSE	FALSE
979	M34H2	5.1	5.1	2646	0.9	0.525	1.8375	2.3625	0.17	1	FALSE	FALSE
983	M34I1	3.4	3.4	756	1.5	0	0.525	0.525	0.02	1.5	FALSE	FALSE
987	M34A7	4.3	4.3	13769	-0.5	245.68	9.5618	255.24	0.42	-0.1	FALSE	FALSE
989	M34J1	3.2	3.2	3780	0.1	3.4125	2.625	6.0375	0.06	0.2	FALSE	FALSE
991	M34K1	4.5	4.5	4158	1.1	0.2625	2.8875	3.15	0.05	1.1	FALSE	FALSE
993	M34K2	4.7	4.7	378	3	0	0.2625	0.2625	0.01	3	FALSE	FALSE
995	M34J2	5	5	378	2.5	0	0.2625	0.2625	0.01	2.5	FALSE	FALSE
997	M34A5	4.2	4.2	0	-2.1	365.33	0	365.33	0.43	-1.6	FALSE	FALSE
999	M34A4	4.1	4.1	0	-3	365.33	0	365.33	0.45	-2.5	FALSE	FALSE
1001	M34E2	7.1	7.1	2940	1.5	0	2.0417	2.0417	0.03	1.5	FALSE	FALSE
1003	M17M6	7.1	7.1	41040	2.5	11.4	28.5	39.9	0.14	2.6	FALSE	FALSE
1005	M17M5	6.8	6.8	16416	1.9	39.9	11.4	51.3	0.15	2	FALSE	FALSE
1007	M17M4	6.8	6.8	0	1	51.3	0	51.3	0.15	1.2	FALSE	FALSE
1009	M17M3	6.8	6.8	16416	0.6	51.3	11.4	62.7	0.17	0.8	FALSE	FALSE
1011	M17M2	6.9	6.9	16416	-0.3	62.7	11.4	74.1	0.19	-0.1	FALSE	FALSE
1013	M17M1	7	7	16416	-0.8	74.1	11.4	85.5	0.2	-0.6	FALSE	FALSE
1015	M17A3	9.6	9.6	2720.8	-6.4	694.03	1.8894	695.92	0.83	-5.6	FALSE	FALSE
1017	M17A6	8	8	0	-3.4	608.53	0	608.53	0.49	-2.9	FALSE	FALSE
1019	M17O3	8.4	8.4	32832	4.1	0	22.8	22.8	0.1	4.2	FALSE	FALSE
1020	M17O2	6.9	6.9	16416	2.9	22.8	11.4	34.2	0.13	3	FALSE	FALSE
1022	M17N1	6.7	6.7	49248	0.1	91.2	34.2	125.4	0.22	0.3	FALSE	FALSE
1024	M17N2	6.9	6.9	32832	3.7	11.4	22.8	34.2	0.13	3.8	FALSE	FALSE
1026	M17N3	6.8	6.8	0	4.7	11.4	0	11.4	0.07	4.7	FALSE	FALSE
1028	M17N4	7.6	7.6	16416	5.3	0	11.4	11.4	0.07	5.3	FALSE	FALSE
1030	M17A2	8	8	0	-6.6	821.32	0	821.32	0.84	-5.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1033	M17U1	6.9	6.9	16416	-2.3	0	11.4	11.4	0.06	-2.2	FALSE	FALSE
1034	M17T3	8.1	8.1	0	-2.8	48.45	0	48.45	0.14	-2.7	FALSE	FALSE
1036	M17T4	8.2	8.2	16416	1.1	25.65	11.4	37.05	0.12	1.2	FALSE	FALSE
1038	M17V1	7.1	7.1	16416	1.8	2.85	11.4	14.25	0.08	1.9	FALSE	FALSE
1040	M17V2	6.8	6.8	4104	2.8	0	2.85	2.85	0.04	2.8	FALSE	FALSE
1042	M17T8	8.5	8.5	0	2.8	0	0	0	0	2.8	FALSE	FALSE
1043	M17T7	8	8	16416	2.4	0	11.4	11.4	0.07	2.5	FALSE	FALSE
1045	M17T6	7.2	7.2	0	2.1	11.4	0	11.4	0.07	2.1	FALSE	FALSE
1047	M17T5	7.7	7.7	0	1.8	11.4	0	11.4	0.07	1.9	FALSE	FALSE
1050	M17U2	7.6	7.6	0	-1	0	0	0	0	-1	FALSE	FALSE
1052	M17T2	7	7	0	-3.3	48.45	0	48.45	0.15	-3.2	FALSE	FALSE
1054	M17T1	7.4	7.4	0	-3.5	48.45	0	48.45	0.13	-3.3	FALSE	FALSE
1060	M17Q0	7.2	7.2	31920	0.6	37.05	22.167	59.217	0.17	0.8	FALSE	FALSE
1062	M17R1	6.9	6.9	0	1.8	0	0	0	0	1.8	FALSE	FALSE
1064	M17R2	7.1	7.1	0	2.9	0	0	0	0	2.9	FALSE	FALSE
1066	M17R3	7.6	7.6	0	3.6	0	0	0	0	3.6	FALSE	FALSE
1075	M17H3	8.4	8.4	4104	4.5	0	2.85	2.85	0.04	4.5	FALSE	FALSE
1076	M17H2	8.6	8.6	19494	3	2.85	13.538	16.388	0.09	3.1	FALSE	FALSE
1078	M17H1	8.7	8.7	4104	2.6	16.388	2.85	19.237	0.18	2.7	FALSE	FALSE
1082	M17G1	9.6	9.6	32832	4.8	0	22.8	22.8	0.1	4.9	FALSE	FALSE
1084	M17G2	9.4	9.4	0	7	0	0	0	0	7	FALSE	FALSE
1092	M17P1	7	8.6	32832	2.9	5.7	22.8	28.5	0.11	3	FALSE	FALSE
1094	M17P2	7.4	7.4	0	4.1	5.7	0	5.7	0.05	4.2	FALSE	FALSE
1096	M17P3	8	9.5	8208	4.5	0	5.7	5.7	0.05	4.6	FALSE	FALSE
1141	M14I1	5.4	5.4	2052	-0.8	1.71	1.425	3.135	0.04	-0.8	FALSE	FALSE
1143	M14I2	5.3	5.3	2052	0.5	0.285	1.425	1.71	0.03	0.5	FALSE	FALSE
1145	M14I3	5.8	5.8	410.4	1.5	0	0.285	0.285	0.01	1.5	FALSE	FALSE
1149	M14J2	5.7	5.7	1641.6	-0.7	1.425	1.14	2.565	0.04	-0.7	FALSE	FALSE
1151	M14J3	5.7	5.7	1641.6	0.3	0.285	1.14	1.425	0.03	0.3	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1153	M14J4	5.9	5.9	410.4	1.4	0	0.285	0.285	0.01	1.4	FALSE	FALSE
1157	M14L1	5.5	5.5	5335.2	0.1	0.57	3.705	4.275	0.04	0.1	FALSE	FALSE
1159	M14L2	5.2	5.2	820.8	1.5	0	0.57	0.57	0.02	1.5	FALSE	FALSE
1161	M14K1	5.2	5.2	3693.6	0.6	0.57	2.565	3.135	0.04	0.7	FALSE	FALSE
1163	M14K2	5.6	5.6	820.8	1.6	0	0.57	0.57	0.02	1.6	FALSE	FALSE
1165	M14B1	6.5	6.5	22002	-1.7	76.633	15.279	91.913	0.2	-1.5	FALSE	FALSE
1167	M14B2	5.3	5.3	110352	-1.4	0	76.633	76.633	0.29	-1.1	FALSE	FALSE
1169	M14A6	5.1	5.1	0	-0.5	76.174	0	76.174	0.19	-0.3	FALSE	FALSE
1173	M14M1	5.3	5.3	4924.8	-0.4	13.965	3.42	17.385	0.24	-0.2	FALSE	FALSE
1175	M14N1	5.6	5.6	1641.6	0.9	0.57	1.14	1.71	0.03	0.9	FALSE	FALSE
1177	M14N2	5.5	5.5	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1179	M14O1	5.6	5.6	410.4	2.5	0	0.285	0.285	0.01	2.5	FALSE	FALSE
1181	M14M2	6.6	6.6	4924.8	2.2	8.835	3.42	12.255	0.07	2.2	FALSE	FALSE
1183	M14P1	6.8	6.8	820.8	3.8	0	0.57	0.57	0.02	3.8	FALSE	FALSE
1185	M14M3	7.4	7.4	5745.6	3	4.275	3.99	8.265	0.07	3.1	FALSE	FALSE
1187	M14Q1	7.3	7.3	1231.2	4.3	0	0.855	0.855	0.02	4.3	FALSE	FALSE
1189	M14M4	8	8	4104	4.3	0.57	2.85	3.42	0.05	4.3	FALSE	FALSE
1191	M14R1	7.5	7.5	410.4	4.4	0	0.285	0.285	0.02	4.4	FALSE	FALSE
1193	M14M5	9.1	9.1	410.4	5.7	0	0.285	0.285	0.01	5.7	FALSE	FALSE
1195	M14A8	6.7	6.7	2462.4	-0.6	27.93	1.71	29.64	0.43	-0.2	FALSE	FALSE
1197	M14A9	8	8	2052	0.4	26.505	1.425	27.93	0.13	0.5	FALSE	FALSE
1199	M14Y1	7.8	7.8	410.4	4.8	0	0.285	0.285	0.01	4.8	FALSE	FALSE
1201	M14S1	5.3	5.3	10670.4	1	16.957	7.41	24.368	0.11	1.1	FALSE	FALSE
1203	M14X1	6.4	6.4	2052	2	0.7125	1.425	2.1375	0.04	2	FALSE	FALSE
1205	M14X2	7.3	7.3	1026	3.3	0	0.7125	0.7125	0.02	3.3	FALSE	FALSE
1207	M14S2	5.7	5.7	2872.8	2.1	12.825	1.995	14.82	0.1	2.1	FALSE	FALSE
1209	M14S3	6	6	5335.2	2.9	7.41	3.705	11.115	0.08	2.9	FALSE	FALSE
1211	M14V1	7.6	7.6	820.8	3.9	0	0.57	0.57	0.02	3.9	FALSE	FALSE
1213	M14S4	7.7	7.7	5335.2	3.7	3.135	3.705	6.84	0.07	3.8	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1215	M14W1	7.2	7.2	410.4	4.2	0	0.285	0.285	0.02	4.2	FALSE	FALSE
1217	M14S5	8	8	3693.6	4.7	0.285	2.565	2.85	0.04	4.7	FALSE	FALSE
1219	M14T1	6.3	6.3	1641.6	3.1	0.57	1.14	1.71	0.03	3.1	FALSE	FALSE
1221	M14U1	5.9	5.9	410.4	3.5	0	0.285	0.285	0.02	3.5	FALSE	FALSE
1223	M14T2	6.6	6.6	410.4	3.4	0	0.285	0.285	0.02	3.4	FALSE	FALSE
1225	M14S6	8.8	8.8	410.4	5.8	0	0.285	0.285	0.01	5.8	FALSE	FALSE
1227	M14A10	8.2	8.2	11491.2	1.2	18.24	7.98	26.22	0.12	1.3	FALSE	FALSE
1229	M14A11	8.3	8.3	6976.8	2	4.845	4.845	9.69	0.07	2.1	FALSE	FALSE
1231	M14BB1	8.4	8.4	2462.4	3.3	1.71	1.71	3.42	0.05	3.3	FALSE	FALSE
1233	M14BB2	8.4	8.4	2052	4.2	0.285	1.425	1.71	0.03	4.3	FALSE	FALSE
1235	M14AA1	8.6	8.6	4104	3.9	0.57	2.85	3.42	0.04	4	FALSE	FALSE
1237	M14AA2	8.4	8.4	820.8	4.8	0	0.57	0.57	0.02	4.8	FALSE	FALSE
1239	M14A12	8.9	8.9	1231.2	3.5	0.57	0.855	1.425	0.03	3.6	FALSE	FALSE
1241	M14A13	9	9	820.8	5	0	0.57	0.57	0.02	5	FALSE	FALSE
1243	M14BB3	8.4	8.4	410.4	5.2	0	0.285	0.285	0.02	5.2	FALSE	FALSE
1245	M14Z1	8.4	8.4	6566.4	4.2	0.57	4.56	5.13	0.05	4.2	FALSE	FALSE
1247	M14Z2	8.4	8.4	820.8	5.5	0	0.57	0.57	0.02	5.5	FALSE	FALSE
1269	M22A1	5	5	39480	-1.4	559.89	27.417	587.31	0.48	-0.9	FALSE	FALSE
1276	M22B1	6.2	6.2	146728.8	1.2	0.945	101.9	102.84	0.22	1.4	FALSE	FALSE
1278	M22B2	5.6	5.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
1280	M22E1	5.3	5.3	453.6	2.6	0	0.315	0.315	0.01	2.6	FALSE	FALSE
1282	M22A3	5.2	5.2	24494.4	0.9	326.49	17.01	343.5	0.44	1.4	FALSE	FALSE
1287	M26A1	5.4	5.4	5443.2	0	0.63	3.78	4.41	-0.04	0	FALSE	FALSE
1315	M17Q5	7.6	7.6	4104	5.3	0	2.85	2.85	0.04	5.3	FALSE	FALSE
1316	M17Q4	7.2	7.2	32832	4.1	2.85	22.8	25.65	0.12	4.2	FALSE	FALSE
1318	M17Q3	7.2	7.2	16416	3.3	25.65	11.4	37.05	0.13	3.4	FALSE	FALSE
1325	M40A1	8	8	0	-0.6	90.528	0	90.528	0.21	-0.4	FALSE	FALSE
1326	M40A2	7.9	7.9	0	0.3	88.078	0	88.078	0.1	0.4	FALSE	FALSE
1328	M40A3	8.4	8.4	0	1.5	88.078	0	88.078	0.1	1.6	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1330	M40A4	7.5	7.5	0	2.7	88.078	0	88.078	0.2	2.9	FALSE	FALSE
1347	M34U1	5.1	5.1	15807.75	2.6	0	10.978	10.978	0.08	2.7	FALSE	FALSE
1348	M34L1	4.7	4.7	3250.8	1.6	15.8	2.2575	18.058	0.1	1.7	FALSE	FALSE
1350	M34A8	4.6	4.6	5292	0	235.96	3.675	239.64	0.58	0.6	FALSE	FALSE
1354	M16A5	5.8	5.8	0	0.6	31.711	0	31.711	0.14	0.7	FALSE	FALSE
1355	M16A6	5.4	5.4	22680	1.1	15.961	15.75	31.711	0.12	1.2	FALSE	FALSE
1357	M16A7	6.2	6.2	6200.88	2.8	4.5675	4.3062	8.8737	0.06	2.8	FALSE	FALSE
1359	M16A8	6.1	6.1	0	3.5	4.5675	0	4.5675	0.05	3.6	FALSE	FALSE
1361	M16A9	7	7	5443.2	3.9	0.7875	3.78	4.5675	0.04	4	FALSE	FALSE
1363	M16A10	6.9	6.9	1134	5.1	0	0.7875	0.7875	0.02	5.1	FALSE	FALSE
1365	M16G1	4.2	4.2	7257.6	2.5	2.0475	5.04	7.0875	0.06	2.5	FALSE	FALSE
1367	M16G2	5.5	5.5	2948.4	3.4	0	2.0475	2.0475	0.04	3.5	FALSE	FALSE
1369	M37A4	5.5	5.5	1503.6	-0.4	43.655	1.0442	44.699	0.14	-0.3	FALSE	FALSE
1370	M37A3	5.4	5.4	4510.8	-1.6	44.699	3.1325	47.831	0.15	-1.5	FALSE	FALSE
1372	M37A2	5.3	5.3	9021.6	-2.8	49.92	6.265	56.185	0.16	-2.6	FALSE	FALSE
1374	M37B1	4.8	4.8	3007.2	-1.7	0	2.0883	2.0883	0.03	-1.7	FALSE	FALSE
1376	M37A1	5.7	5.7	0	-3.2	69.759	0	69.759	0.16	-3	FALSE	FALSE
1378	M37C1	6	6	9021.6	-2.6	7.3092	6.265	13.574	0.08	-2.6	FALSE	FALSE
1380	M37E1	5.3	5.3	3007.2	-1.6	0	2.0883	2.0883	0.03	-1.6	FALSE	FALSE
1382	M37C2	6.3	6.3	4510.8	-1.4	2.0883	3.1325	5.2208	0.05	-1.3	FALSE	FALSE
1384	M37C3	5.1	5.1	1503.6	-0.4	0	1.0442	1.0442	0.02	-0.4	FALSE	FALSE
1403	M17B5	9.7	9.7	16416	4.7	164.59	11.4	175.99	0.53	5.2	FALSE	FALSE
1405	M17I1	8.1	8.1	16416	4.9	0	11.4	11.4	0.28	5.2	FALSE	FALSE
1407	M17B6	7.7	7.7	122094	5.6	68.4	84.788	153.19	0.27	5.8	FALSE	FALSE
1409	M17D1	8.1	8.1	16416	6.2	0	11.4	11.4	0.07	6.3	FALSE	FALSE
1411	M17B7	8.1	8.1	16416	6.1	45.6	11.4	57	-0.26	5.9	FALSE	FALSE
1413	M17B9	7.6	7.6	16416	6.5	34.2	11.4	45.6	0.15	6.7	FALSE	FALSE
1415	M17E1	8.6	8.6	16416	7	0	11.4	11.4	0.07	7.1	FALSE	FALSE
1417	M17B10	10.2	10.2	16416	7	11.4	11.4	22.8	0.11	7.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1419	M17B11	10.3	10.3	16416	7.8	0	11.4	11.4	0.07	7.8	FALSE	FALSE
1421	M34E1	5.1	5.1	0	-0.9	2.0417	0	2.0417	0.03	-0.9	FALSE	FALSE
1424	M32A1	5.8	5.8	0	-1.2	59.743	0	59.743	0.17	-1	FALSE	FALSE
1426	M32C1	5.7	5.7	0	0	13.805	0	13.805	-0.31	-0.3	FALSE	FALSE
1430	M32A2	7.2	7.2	21413.28	0.8	31.068	14.87	45.938	0.15	0.9	FALSE	FALSE
1432	M32A3	5.6	5.6	12285	1.1	22.537	8.5313	31.068	0.12	1.3	FALSE	FALSE
1434	M32A4	5.3	5.3	23784.18	1.9	0	16.517	16.517	0.09	2	FALSE	FALSE
1436	M32D1	4.8	4.8	8668.8	1.4	0	6.02	6.02	0.06	1.4	FALSE	FALSE
1440	M31A4	5.5	5.5	22378.02	0.4	0	15.54	15.54	0.11	0.5	FALSE	FALSE
1441	M31A3	7.4	7.4	26877.48	-0.1	15.54	18.665	34.205	0.13	0.1	FALSE	FALSE
1443	M31A2	7.7	7.7	28061.88	-2.3	34.205	19.487	53.693	0.16	-2.1	FALSE	FALSE
1445	M31A1	6.2	6.2	56089.32	-4	86.481	38.951	125.43	0.24	-3.7	FALSE	FALSE
1446	M31B1	5.8	5.8	13608	-0.4	23.338	9.45	32.788	0.12	-0.3	FALSE	FALSE
1449	M31B2	6.3	6.3	8022	0.8	17.767	5.5708	23.338	0.1	0.9	FALSE	FALSE
1451	M31B4	4.3	4.3	11116.56	3.4	0	7.7198	7.7198	0.06	3.5	FALSE	FALSE
1455	M34A13	4.7	4.7	378	2.1	6.3	0.2625	6.5625	0.07	2.2	FALSE	FALSE
1456	M34A11	4.4	4.4	0	1.5	213.13	0	213.13	0.41	1.9	FALSE	FALSE
1458	M34A10	4.4	4.4	756	0.8	213.13	0.525	213.65	0.42	1.2	FALSE	FALSE
1461	M34A12	4.5	4.5	756	1.7	7.0875	0.525	7.6125	0.27	1.9	FALSE	FALSE
1497	M18A-B1	5.3	5.3	2721.6	0.9	0	1.89	1.89	0.03	0.9	FALSE	FALSE
1499	M18A-A4	5.5	5.5	2268	0.2	67.499	1.575	69.074	0.55	0.7	FALSE	FALSE
1501	M18A-A5	5.3	5.3	8164.8	0.7	61.829	5.67	67.499	0.19	0.9	FALSE	FALSE
1503	M18A-C1	8.2	8.2	907.2	2.3	0	0.63	0.63	0.02	2.3	FALSE	FALSE
1505	M18A-A6	5.4	5.4	1360.8	1.2	60.254	0.945	61.199	0.17	1.4	FALSE	FALSE
1507	M18A-D1	9.2	9.2	6350.4	2.5	0	4.41	4.41	0.05	2.5	FALSE	FALSE
1509	M18A-A7	7.7	7.7	1360.8	1.7	54.899	0.945	55.844	0.16	1.9	FALSE	FALSE
1511	M18A-A8	8.3	8.3	2268	2.1	53.324	1.575	54.899	0.16	2.3	FALSE	FALSE
1513	M46A1	4.9	4.9	(N/A)	0.8	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	FALSE	FALSE
1519	M34C1	6.5	6.5	11550	-1	26.396	8.0208	34.417	0.11	-0.9	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1521	M34C2	7.1	7.1	0	-0.3	26.396	0	26.396	0.11	-0.2	FALSE	FALSE
1523	M34C3	7.2	7.2	5460	1.7	22.604	3.7917	26.396	0.11	1.8	FALSE	FALSE
1525	M34C4	7.6	7.6	2310	2.9	21	1.6042	22.604	0.1	3	FALSE	FALSE
1527	M34C5	8.5	8.5	30240	4.1	0	21	21	0.1	4.2	FALSE	FALSE
1529	M34D2	5.5	5.5	12640.25	3.6	0	8.778	8.778	0.06	3.6	FALSE	FALSE
1530	M34D1	5.7	5.7	0	2.9	8.778	0	8.778	0.06	3	FALSE	FALSE
1532	M34B1	5.8	5.8	8050	1.7	19.205	5.5903	24.795	0.11	1.8	FALSE	FALSE
1534	M34B2	6.7	6.7	0	2.3	10.427	0	10.427	0.07	2.3	FALSE	FALSE
1536	M34B3	5.7	5.7	2520	2.9	8.6771	1.75	10.427	0.07	3	FALSE	FALSE
1538	M34B4	5.3	5.3	10220	3.5	1.5799	7.0972	8.6771	0.06	3.6	FALSE	FALSE
1540	M34B5	6	6	2275	4.3	0	1.5799	1.5799	0.03	4.3	FALSE	FALSE
1556	M17F4	10	10	84606	5.2	0	58.754	58.754	0.19	5.4	FALSE	FALSE
1568	M14H5	5.7	5.7	8208	5.2	0	5.7	5.7	0.06	5.3	FALSE	FALSE
1579	M16B1	6.4	6.4	4116	-2	32.054	2.8583	34.912	0.11	-1.9	FALSE	FALSE
1581	M16B2	6	6	8232	-1.7	17.179	5.7167	22.896	0.12	-1.5	FALSE	FALSE
1583	M16A2	6	6	0	-2.6	95.475	0	95.475	0.19	-2.4	FALSE	FALSE
1585	M16A3	5.4	5.4	11655	-1.4	87.382	8.0938	95.475	0.21	-1.2	FALSE	FALSE
1587	M16D1	6.1	6.1	24347.4	-0.1	7.5542	16.908	24.462	0.12	0	FALSE	FALSE
1589	M16D2	4.8	4.8	10878	2	0	7.5542	7.5542	0.06	2.1	FALSE	FALSE
1591	M16A4	4.1	4.1	44940	-0.3	31.711	31.208	62.92	0.15	-0.1	FALSE	FALSE
1599	M38D2	8	8	8750.7	0.7	0	6.0769	6.0769	0.06	0.7	FALSE	FALSE
1600	M38D1	5.7	5.7	8750.7	0.1	6.0769	6.0769	12.154	0.07	0.2	FALSE	FALSE
1602	M38A6	6	6	8750.7	-1.1	13.869	6.0769	19.946	0.1	-1	FALSE	FALSE
1604	M17O1	6.9	6.9	32832	1.7	34.2	22.8	57	0.16	1.8	FALSE	FALSE
1609	M3D2	6.3	6.3	3283.2	0.6	8.835	2.28	11.115	0.09	0.7	FALSE	FALSE
1611	M3D1	6.4	6.4	2872.8	-0.2	11.115	1.995	13.11	0.1	-0.1	FALSE	FALSE
1614	M3F1	6.6	6.6	4514.4	-0.4	136.04	3.135	139.17	0.29	-0.1	FALSE	FALSE
1616	M3F2	6	6	4514.4	1.5	132.9	3.135	136.04	0.29	1.8	FALSE	FALSE
1680	M19A2	5.2	5.2	0	1.5	0	0	0	0	1.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
1681	M19A1	5.4	5.4	0	1	0	0	0	0	1	FALSE	FALSE
1695	M38A5	4.9	4.9	18901.68	-2.1	19.946	13.126	33.072	0.12	-2	FALSE	FALSE
1697	M38A4	5	5	18901.68	-3.8	33.072	13.126	46.198	0.15	-3.7	FALSE	FALSE
1701	M38A3	5.1	5.1	18901.68	-5.5	46.198	13.126	59.324	0.18	-5.4	FALSE	FALSE
1703	M38A2	6.6	6.6	38973.06	-7.2	100.33	27.065	127.39	0.25	-7	FALSE	FALSE
1705	M38C1	7	7	38973.06	-0.7	13.938	27.065	41.003	0.14	-0.6	FALSE	FALSE
1709	M38A1	6.1	6.1	20090.99	-8.9	168.25	13.952	182.2	0.3	-8.6	FALSE	FALSE
1711	M38B1	6.5	6.5	19609.59	-1.6	27.236	13.618	40.853	0.14	-1.4	FALSE	FALSE
1713	M38B2	7.1	7.1	19609.59	0.1	13.618	13.618	27.236	0.11	0.2	FALSE	FALSE
1717	M16A1	5.9	5.9	15456	-2.8	138.26	10.733	149	0.27	-2.5	FALSE	FALSE
1726	M16H1	6.4	6.4	4998	-1.9	2.8292	3.4708	6.3	0.06	-1.8	FALSE	FALSE
1727	M16F1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1729	M16B4	7.2	7.2	8988	5	0	6.2417	6.2417	0.05	5	FALSE	FALSE
1731	M16B3	7.2	7.2	11634	-1.5	6.2417	8.0792	14.321	0.08	-1.4	FALSE	FALSE
1732	M16E1	5.3	5.3	4116	3	0	2.8583	2.8583	0.04	3	FALSE	FALSE
1735	M16H2	6.7	6.7	4074	4.2	0	2.8292	2.8292	0.03	4.2	FALSE	FALSE
1751	M31B3	5.4	5.4	14468.16	1.7	7.7198	10.047	17.767	0.09	1.7	FALSE	FALSE
1755	M30A9	4.1	4.1	0	3.8	0.63	0	0.63	0.02	3.8	FALSE	FALSE
1756	M30A8	4.4	4.4	453.6	3.1	0.63	0.315	0.945	0.03	3.1	FALSE	FALSE
1757	M30A6	3.3	3.3	0	2.7	1.26	0	1.26	0.03	2.7	FALSE	FALSE
1758	M30K1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1759	M30A5	3.8	3.8	2721.6	2.2	2.52	1.89	4.41	0.05	2.2	FALSE	FALSE
1760	M30J1	4	4	907.2	3.5	0	0.63	0.63	0.02	3.5	FALSE	FALSE
1761	M30A4	3.6	3.6	2721.6	1.4	5.67	1.89	7.56	0.07	1.5	FALSE	FALSE
1762	M30I1	3.4	3.4	907.2	2	0	0.63	0.63	0.02	2	FALSE	FALSE
1763	M30H1	4	4	907.2	3.1	0	0.63	0.63	0.02	3.1	FALSE	FALSE
1764	M30A3	3.7	3.7	1814.4	0.6	8.505	1.26	9.765	0.07	0.6	FALSE	FALSE
1767	M30A1	3.5	3.5	1814.4	-0.9	28.35	1.26	29.61	0.12	-0.8	FALSE	FALSE
1836	M29A1	4.5	4.5	1814.4	-1.6	22.995	1.26	24.255	0.09	-1.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3102	M34G1	5.2	5.2	68390	3.8	0	47.493	47.493	0.16	4	FALSE	FALSE
3105	M34O1	5.3	5.3	1814.4	2.9	0.63	1.26	1.89	0.03	2.9	FALSE	FALSE
3107	M34O2	5	5	907.2	3.3	0	0.63	0.63	0.02	3.3	FALSE	FALSE
3112	M29A2	4.5	4.5	8164.8	-0.7	8.505	5.67	14.175	0.08	-0.6	FALSE	FALSE
3118	M29E1	5.4	5.4	907.2	4	0	0.63	0.63	0.02	4	FALSE	FALSE
3120	M29B1	4.2	4.2	3628.8	-1	5.67	2.52	8.19	0.07	-0.9	FALSE	FALSE
3122	M29F1	4.6	4.6	907.2	2.5	0	0.63	0.63	0.02	2.5	FALSE	FALSE
3125	M29B2	4.5	4.5	4989.6	0	1.575	3.465	5.04	0.05	0.1	FALSE	FALSE
3127	M29B4	4.6	4.6	453.6	2.5	0	0.315	0.315	0.01	2.5	FALSE	FALSE
3129	M29G1	4.5	4.5	0	2.5	0	0	0	0	2.5	FALSE	FALSE
3131	M29C1	5	5	0	2	0.63	0	0.63	0.02	2	FALSE	FALSE
3133	M29C2	5.1	5.1	907.2	3	0	0.63	0.63	0.02	3	FALSE	FALSE
3135	M34L2	4.3	4.3	1360.8	2.3	3.8775	0.945	4.8225	0.05	2.4	FALSE	FALSE
3137	M34M1	4.4	4.4	378	2.8	0.525	0.2625	0.7875	0.02	2.9	FALSE	FALSE
3139	M34M2	4.8	4.8	378	3.8	0	0.2625	0.2625	0.01	3.8	FALSE	FALSE
3141	M34N1	4.5	4.5	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3143	M34L3	4.2	4.2	3693.6	2.9	0.525	2.565	3.09	0.04	2.9	FALSE	FALSE
3145	M34L4	4.4	4.4	756	3.9	0	0.525	0.525	0.02	3.9	FALSE	FALSE
3147	M34A16	5	5	378	4.9	0	0.2625	0.2625	0.01	4.9	FALSE	FALSE
3148	M34A14	4.3	4.3	4158	2.3	2.8875	2.8875	5.775	0.06	2.3	FALSE	FALSE
3152	M34T1	4	4	378	3.5	0	0.2625	0.2625	0.01	3.5	FALSE	FALSE
3155	M30A10	4.6	4.6	453.6	4	0.315	0.315	0.63	0.02	4	FALSE	FALSE
3165	M30A11	4.6	4.6	453.6	4.4	0	0.315	0.315	0.02	4.4	FALSE	FALSE
3168	M30C2	4	4	453.6	1.3	0	0.315	0.315	0.02	1.3	FALSE	FALSE
3170	M30C1	4	4	2268	-0.5	0.315	1.575	1.89	0.03	-0.5	FALSE	FALSE
3174	M30B1	3.2	3.2	1360.8	-0.5	12.6	0.945	13.545	0.08	-0.4	FALSE	FALSE
3176	M30B4	4	4	0	1.7	4.095	0	4.095	0.05	1.8	FALSE	FALSE
3178	M30B5	4.8	4.8	453.6	2.2	3.78	0.315	4.095	0.05	2.3	FALSE	FALSE
3180	M30B6	4.9	4.9	4536	2.7	0.63	3.15	3.78	0.05	2.7	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3182	M30B7	4.1	4.1	453.6	3.6	0	0.315	0.315	0.01	3.6	FALSE	FALSE
3184	M30M1	4.6	4.6	453.6	4	0	0.315	0.315	0.02	4	FALSE	FALSE
3186	M30B2	2.8	2.8	3628.8	0	10.08	2.52	12.6	0.08	0.1	FALSE	FALSE
3189	M30E1	3	3	2721.6	1.5	0	1.89	1.89	0.03	1.5	FALSE	FALSE
3191	M30B3	2.8	2.8	3175.2	1	5.985	2.205	8.19	0.07	1.1	FALSE	FALSE
3194	M30F1	2.6	2.6	2721.6	1.8	0	1.89	1.89	0.04	1.8	FALSE	FALSE
3243	M18C9	5.3	5.3	453.6	3.4	75.334	0.315	75.649	0.19	3.6	FALSE	FALSE
3246	M18C2	5.5	5.5	10432.8	3	76.594	7.245	83.839	0.19	3.2	FALSE	FALSE
3276	M18C1	5.4	5.4	11793.6	2.5	83.839	8.19	92.029	0.21	2.7	FALSE	FALSE
3304	M24D1	7.9	7.9	3628.8	-0.9	1.26	2.52	3.78	0.06	-0.8	FALSE	FALSE
3319	M24A2	5.4	5.4	1814.4	-1	0.63	1.26	1.89	0.11	-0.9	FALSE	FALSE
3328	M25A1	4.6	4.6	5443.2	-1	44.472	3.78	48.252	0.13	-0.8	FALSE	FALSE
3330	M25C1	5.6	5.6	5896.8	0.6	1.26	4.095	5.355	0.05	0.7	FALSE	FALSE
3346	M25A4	4.6	4.6	4536	1	13.977	3.15	17.127	0.09	1.1	FALSE	FALSE
3348	M25A2	5.6	5.6	8618.4	-0.4	23.112	5.985	29.097	0.13	-0.3	FALSE	FALSE
3357	M25B1	5.3	5.3	5896.8	0.3	10.02	4.095	14.115	0.08	0.3	FALSE	FALSE
3364	M7C1	8	8	7344	-0.9	104.49	5.1	109.59	0.23	-0.7	FALSE	FALSE
3377	M7C3	8.3	8.3	9936	0.7	84.461	6.9	91.361	0.21	0.9	FALSE	FALSE
3383	M25B2	5.4	5.4	9979.2	0.9	1.83	6.93	8.76	0.08	1	FALSE	FALSE
3389	M25A5	4	4	453.6	1.5	13.347	0.315	13.662	0.08	1.6	FALSE	FALSE
3391	M25A6	4.6	4.6	18765.6	1.9	0.315	13.032	13.347	0.08	2	FALSE	FALSE
3397	M25K1	4.2	4.2	453.6	2.4	0	0.315	0.315	0.01	2.4	FALSE	FALSE
3406	M18E3	7	7	907.2	1.3	0	0.63	0.63	0.02	1.3	FALSE	FALSE
3422	M1C2	6.7	6.7	432	4	0	0.3	0.3	0.01	4	FALSE	FALSE
3423	M1C1	6.4	6.4	5184	2	0.3	3.6	3.9	0.04	2	FALSE	FALSE
3509	M35A1	6	6	0	-1.3	452.83	0	452.83	0.5	-0.8	FALSE	FALSE
3511	M35A2	6.7	6.7	9904.23	-0.1	83.012	6.8779	89.89	0.21	0.1	FALSE	FALSE
3513	M35A3	6.7	6.7	24740.52	1.5	65.831	17.181	83.012	0.2	1.7	FALSE	FALSE
3515	M35D1	6	6	49581.63	2	0	34.432	34.432	0.13	2.1	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
3642	M18A-A1	5.1	5.1	0	-1	76.004	0	76.004	0.17	-0.8	FALSE	FALSE
3682	M22A4	5.5	5.5	0	1.6	326.49	0	326.49	0.54	2.1	FALSE	FALSE
3901	M13A1	5.5	5.5	7194.6	3.2	3.3337	4.9963	8.33	0.06	3.3	FALSE	FALSE
3947	M10A1	9.3	9.3	2898	5.5	0.46667	2.0125	2.4792	0.04	5.5	FALSE	FALSE
3949	M29A3	4.6	4.6	7711.2	0.2	2.52	5.355	7.875	0.06	0.2	FALSE	FALSE
3982	M38D3	6.5	6.5	0	1.1	0	0	0	0	1.1	FALSE	FALSE
3989	M35A4	6.8	6.8	17653.86	2.7	19.14	12.26	31.4	0.12	2.8	FALSE	FALSE
4007	M9A1	6.9	6.9	71442	-0.3	66.938	49.613	116.55	0.24	-0.1	FALSE	FALSE
4011	M9B1	5.8	5.8	34020	0.5	23.625	23.625	47.25	0.15	0.6	FALSE	FALSE
4017	M5D1	6	6	0	-1	10.71	0	10.71	0.07	-1	FALSE	FALSE
4019	M5D2	6.2	6.2	4082.4	-0.8	7.875	2.835	10.71	0.08	-0.8	FALSE	FALSE
4022	M5A1	6.4	6.4	3175.2	-2.9	34.965	2.205	37.17	0.14	-2.8	FALSE	FALSE
4024	M4A2	7.5	7.5	0	0.3	22.365	0	22.365	0.11	0.4	FALSE	FALSE
4027	M3B1	5.7	5.7	1641.6	1.9	2.565	1.14	3.705	0.05	1.9	FALSE	FALSE
4029	M3B2	5.8	5.8	1231.2	2.8	1.425	0.855	2.28	0.04	2.9	FALSE	FALSE
4031	M3B3	5.5	5.5	410.4	3.3	1.14	0.285	1.425	0.03	3.3	FALSE	FALSE
4033	M3B4	5.4	5.4	1231.2	3.6	0.285	0.855	1.14	0.03	3.6	FALSE	FALSE
4041	M2H1	5.5	5.5	432	3.5	0	0.3	0.3	0.01	3.5	FALSE	FALSE
4049	M2R3	5.9	5.9	2592	3.7	0.6	1.8	2.4	0.04	3.8	FALSE	FALSE
4056	M2T1	5.9	5.9	3024	2.3	0.6	2.1	2.7	0.04	2.3	FALSE	FALSE
4062	M2P1	6	6	4320	0	12.3	3	15.3	0.09	0.1	FALSE	FALSE
4065	M2P2	6.1	6.1	5184	0.5	0.6	3.6	4.2	0.05	0.6	FALSE	FALSE
4071	M2J2	6.4	6.4	432	1	0.6	0.3	0.9	0.02	1	FALSE	FALSE
4079	M1A3	6.4	6.4	2160	-0.1	198	1.5	199.5	0.34	0.3	FALSE	FALSE
4082	M1O1	5.5	5.5	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4090	M1Q1	5.4	5.4	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4097	M1HH1	5.6	5.6	2592	3.5	0.6	1.8	2.4	0.04	3.5	FALSE	FALSE
4103	M1BB1	6.3	6.3	0	2.4	3.6	0	3.6	0.04	2.4	FALSE	FALSE
4106	M1KK1	6.8	6.8	1296	3.5	0.3	0.9	1.2	0.03	3.5	FALSE	FALSE

Model Manhole Data Table 50 Unit Per Acre Build-Out
Exhibit F2

ID	Label	Elev (Grd) (ft)	Elevation (Rim) (ft)	Base Load (Local Sanitary) (gpd)	Elev (Invt) (ft)	Flow (Total In) (gpm)	Flow (Local In) (gpm)	Flow (Total Out) (gpm)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Is Surcharged?
4111	M1BB3	5.9	5.9	432	3.9	0.3	0.3	0.6	0.02	3.9	FALSE	FALSE
4115	M1CC1	6.3	6.3	432	3.5	0.6	0.3	0.9	0.02	3.5	FALSE	FALSE
4121	M1EE1	6.2	6.2	432	2.9	0.6	0.3	0.9	0.02	2.9	FALSE	FALSE
4127	M1A8	6.4	6.4	1296	1.9	186.9	0.89999	187.8	0.29	2.2	FALSE	FALSE
4148	M1U2	5.8	5.8	432	3.6	0.3	0.3	0.6	0.02	3.6	FALSE	FALSE
4152	M1V1	6.4	6.4	864	3	0.6	0.6	1.2	0.03	3	FALSE	FALSE
4158	M1S1	6.2	6.2	0	1.8	3	0	3	0.04	1.8	FALSE	FALSE
4161	M1S2	5.7	5.7	864	2.5	0.6	0.6	1.2	0.03	2.5	FALSE	FALSE
4168	M1M1	5.3	5.3	0	2	0.6	0	0.6	0.02	2	FALSE	FALSE
4174	M1K1	5.1	5.1	1728	2	0.6	1.2	1.8	0.03	2	FALSE	FALSE
4180	M1D1	7	7	3024	-0.2	19.5	2.1	21.6	0.11	-0.1	FALSE	FALSE
4183	M1D3	6.4	6.4	432	3	0.3	0.3	0.6	0.02	3	FALSE	FALSE
4196	M34A15	4	4	3402	3.3	0.2625	2.3625	2.625	0.04	3.3	FALSE	FALSE
4199	M29A4	4.7	4.7	2268	1.1	0.315	1.575	1.89	0.03	1.1	FALSE	FALSE
4203	M29B3	4.6	4.6	1814.4	2	0.315	1.26	1.575	0.03	2	FALSE	FALSE
4206	M30A7	3.7	3.7	0	2.8	1.26	0	1.26	0.03	2.8	FALSE	FALSE
4217	M25A3	4.2	4.2	0	0.2	17.127	0	17.127	0.09	0.3	FALSE	FALSE
4239	M7C2	8.6	8.6	14580	-0.1	92.861	10.125	102.99	0.24	0.1	FALSE	FALSE
4280	M17A4	9.5	9.5	0	-6.3	608.53	0	608.53	0.79	-5.6	FALSE	FALSE
4283	M17A5	8.4	8.4	0	-5.7	608.53	0	608.53	0.69	-5	FALSE	FALSE
4314	M18D1	5.2	5.2	1360.8	3.2	0	0.945	0.945	0.03	3.2	FALSE	FALSE
4384	M32B1	6.3	6.3	13356	2	8.699	9.275	17.974	0.08	2.1	FALSE	FALSE
4416	M30A2	3.6	3.6	1814.4	-0.2	11.655	1.26	12.915	0.08	-0.1	FALSE	FALSE
4452	M38A7	6.3	6.3	0	-0.5	1.715	0	1.715	0.03	-0.5	FALSE	FALSE
4476	M4A1	7.5	7.5	17628	0.1	32.288	12.242	44.529	0.16	0.3	FALSE	FALSE

EXHIBIT F.3
FORCEMAIN DATA TABLE REPORT

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3880	O1L42FB2	PMP-42a	O1L42J1		25	6.4	2	0.013	111.61	111.61	11.4	10	114%	6.74
3494	O2L19FB2	PMP-19B	O1L34J2	Steel	342	8.2	8	0.013	1747.5	1747.5	11.15	10	112%	28.55
3495	O2L19F2	O1L34J2	O2L19J1	Steel	49	6.8	8	0.013	1747.5	1747.5	11.15	10	112%	4.09
3508	O2L19F1	O2L19J1	O2L34J2	Ductile Iron		20.7	8	0.012	1747.5	1747.5	11.15	10	112%	1.06
3489	O2L34F1	O1L34J1	O-2	Ductile Iron		17.4	12	0.012	3723.9	3723.9	10.56	10	106%	0.5
3507	O2L34F2	O2L34J2	O1L34J1	Ductile Iron		23.9	12	0.012	3552.1	3552.1	10.08	10	101%	0.63
1744	O2L31FA2	PMP-31A	O2L31J2	Steel	77	8	3	0.013	201.26	201.26	9.13	10	91%	26.91
3919	O2L45FA2	PMP-45a	O2L45J2	PVC	25	7.6	2	0.01	86.238	86.238	8.81	10	88%	4.18
3921	O2L45F2	O2L45J1	O2L45J2	PVC		39.6	2	0.01	-86.238	-86.238	8.81	10	88%	6.62
3720	O2L18A-F1	O2L18AJ1	M18C9	PVC		71.5	2	0.01	75.334	75.334	7.69	10	77%	9.31
3650	O2L36F2	O2L36J2	O2L36J1	Ductile Iron		585.8	8	0.013	1194.8	1194.8	7.63	10	76%	14.88
3652	O2L36F1	M34A1	O2L36J1	Ductile Iron		48	8	0.012	-1194.8	-1194.8	7.63	10	76%	1.22
527	O2L34FA2	PMP-34A	O2L34J6	Ductile Iron	154	11.3	8	0.012	1150.9	1150.9	7.35	10	74%	3.65
2455	O2L34F5	O2L34J5	O2L34J4	Ductile Iron		2007	8	0.012	1150.9	1150.9	7.35	10	74%	47.56
3624	O2L34F6	O2L34J6	O2L34J5	Ductile Iron		46.9	8	0.012	1150.9	1150.9	7.35	10	74%	1.11
1296	O2L26F1	O2L26J1	M22A4	PVC		142.1	3	0.01	159.28	159.28	7.23	10	72%	10.27
1792	O2L26FB2	PMP-26B	O2L26J1	Steel	79	10.1	3	0.013	159.28	159.28	7.23	10	72%	9.28
446	O2L6FA2	PMP-6A	O2L6J1		74	6.9	3	0.013	153.95	153.95	6.99	10	70%	5.02
3077	O2L16FA2	PMP-16A	O2L16J2	Ductile Iron	77	7.6	4	0.012	269.04	269.04	6.87	10	69%	10.94
3739	O2L16F2	O2L16J2	O2L16J1	PVC		363.9	4	0.01	269.04	269.04	6.87	10	69%	17.1
3811	O2L32F1	O2L32J1	M34A3	PVC		681.8	4	0.01	268.71	268.71	6.86	10	69%	31.97
474	O1L14FA1	PMP-14A	O1L14J3	Steel	134	7.5	6	0.013	547.15	547.15	6.21	10	62%	5.29
3606	O1L14FA2	W-14	PMP-14A	Ductile Iron	44	7.8	6	0.012	547.15	547.15	6.21	10	62%	1.07
4399	O2L47F2	O2L47J2	O2L47J1	PVC		13.6	2	0.01	56.842	56.842	5.8	10	58%	1.05
4410	O2L47FB1	PMP-47B	O2L47J2	PVC	40	7.3	2	0.01	56.842	56.842	5.8	10	58%	3.09
3942	O2L33F2	O2L33J2	O2L33J1	PVC		32.6	2	0.01	56.531	56.531	5.77	10	58%	2.49
3944	O2L33FA2	PMP-33A	O2L33J2	Steel	70	5.9	2	0.013	56.531	56.531	5.77	10	58%	8.7
3821	O2L7FA2	PMP-7A	O2L7J2	Ductile Iron	104	7.6	4	0.012	213.42	213.42	5.45	10	55%	3.18
3825	O2L7F2	O2L7J2	O2L7J1	PVC		31.1	4	0.01	213.42	213.42	5.45	10	55%	0.95

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3927	O2L46FA2	PMP-46a	O2L46J1	PVC	25	6.3	2	0.01	53.324	53.324	5.45	10	55%	1.72
3932	O2L46F1	O2L46J1	M18A-A8	PVC		213.3	2	0.01	53.324	53.324	5.45	10	55%	14.64
3587	O2L44F2	O1L44J2	O1L44J1	PVC		124.3	2	0.01	52.785	52.785	5.39	10	54%	8.37
3695	O2L44FA2	PMP-44a	O1L44J2	PVC	25	7.1	2	0.01	52.785	52.785	5.39	10	54%	1.68
217	O2L11F1	O2L11J1	O2L10J2	PVC		477.6	6	0.01	455.24	455.24	5.17	10	52%	8.25
477	O2L10F2	O2L10J2	O2L10J1	PVC		613.4	6	0.01	455.24	455.24	5.17	10	52%	10.59
3964	O2L10F1	O2L10J1	O2L36J3	Ductile Iron		287.1	6	0.012	455.24	455.24	5.17	10	52%	4.96
3664	O2L31F2	O2L31J2	O2L31J1	PVC		1088.2	4	0.01	201.26	201.26	5.14	10	51%	29.87
3506	O2L34F3	O2L34J3	O2L34J2	Ductile Iron		21.1	12	0.012	1804.6	1804.6	5.12	10	51%	0.16
3089	O2L29FA2	PMP-29A	O2L29J2	Steel	78	11.7	3	0.013	104.88	104.88	4.76	10	48%	7.74
3095	O2L29F2	O2L29J2	O2L29J1	PVC		12.7	3	0.01	104.88	104.88	4.76	10	48%	0.42
1691	O2L22A2	PMP-22A	O2L22J2	Steel	113	7.5	4	0.013	183.34	183.34	4.68	10	47%	4.24
3716	O2L22F1	O2L22J2	O2L22J1	PVC		973.6	4	0.013	183.34	183.34	4.68	10	47%	22.48
216	O2L12F1	O2L12J1	O2L11J1	PVC		333.4	6	0.01	409.22	409.22	4.64	10	46%	4.73
4402	O2L47F1	O2L47J1	M34A11	PVC		559.7	3	0.01	100.64	100.64	4.57	10	46%	17.28
3725	O2L18F4	O2L18J3	O2L18J2	Ductile Iron		170.7	3	0.012	97.859	97.859	4.44	10	44%	5.01
163	O2L18F1	O2L18J1	O2L36J2	Ductile Iron		130.4	8	0.012	689.45	689.45	4.4	10	44%	1.2
3730	O2L18F3	O2L18J2	O2L18J1	Cast iron		1013.7	8	0.012	689.45	689.45	4.4	10	44%	13.04
3527	O2L35FA2	PMP-35A	O2L35J2	Steel	90	6.9	4	0.013	171.8	171.8	4.39	10	44%	3
3529	O2L35F2	O2L35J2	O2L35J1	PVC		9.4	4	0.01	171.8	171.8	4.39	10	44%	0.19
3536	O2L35F1	O2L35J1	O1L34J1	PVC		2583.6	4	0.01	171.8	171.8	4.39	10	44%	52.9
3975	O1L43FA1	PMP-43a	O1L43J1	PVC	25	7.5	2	0.01	42.611	42.611	4.35	10	44%	1.13
3978	O1L43F1	O1L43J1	M37A4	PVC		533.5	2	0.01	42.611	42.611	4.35	10	44%	24.17
4470	O2L48F1	O2L48J1	M36I1	PVC		570.6	2	0.01	41.077	41.077	4.19	10	42%	24.15
1798	O1LS14F1	O1L14J1	O-1	PVC		10.5	10	0.01	1019.9	1019.9	4.17	10	42%	0.07
423	O2L2F1	O2L2J1	M3J1	Asbestos Cement		569.4	4	0.011	161.96	161.96	4.13	10	41%	12.47
3865	O2L2FA2	PMP-2A	O2L2J1	Ductile Iron	112	10.6	4	0.012	161.96	161.96	4.13	10	41%	2.06
390	O2L23FB2	PMP-23B	O2L23F1	Steel	84	8.2	3	0.013	89.097	89.097	4.04	10	40%	3.37
3979	O2L22F1	O2L22J1	O2L34J3	Ductile Iron		348.7	8	0.012	619.27	619.27	3.95	10	40%	2.62

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3830	O2L6F1	O2L6J1	M1A9	PVC		631.6	4	0.01	153.95	153.95	3.93	10	39%	10.55
464	O1L17FB2	W-17	PMP-17B	Steel	21.1	9.5	6	0.013	333.17	333.17	3.78	10	38%	0.33
3728	O2L1F1	O2L1J1	O2L18J2	Cast iron		255.1	8	0.012	591.6	591.6	3.78	10	38%	2.47
427	O2L25FA2	PMP-25A	O2L25J1	Ductile Iron	84	10.6	3	0.012	82.961	82.961	3.77	10	38%	1.81
3827	O2L25F1	O2L25J1	M7C3	PVC		626.2	3	0.01	82.961	82.961	3.77	10	38%	13.52
511	O2F32FB1	W-32	PMP-32B	Ductile Iron	16.1	9.7	4	0.012	142.69	142.69	3.64	10	36%	0.23
3913	O2L32FB2	PMP-32B	O2L32J2	Ductile Iron	101	6.8	4	0.012	142.69	142.69	3.64	10	36%	1.47
3998	O2L32F2	O2L32J2	O2L32J1	PVC		521.1	4	0.01	142.69	142.69	3.64	10	36%	7.56
2443	O1L14F2	O1L14J2	O1L14J1	PVC		1384.7	10	0.01	880.32	880.32	3.6	10	36%	6.74
3482	O1L40FA1	PMP-40a	O1L40J1	Ductile Iron	70	13.3	4	0.012	139.62	139.62	3.56	10	36%	0.98
3955	O1L40F1	O1L14J1	O1L40J1	Cast iron		1155.4	4	0.012	-139.62	-139.62	3.56	10	36%	22.6
409	O2L1FA2	PMP-1A	O2L1J2	Ductile Iron	10	6.4	4	0.012	137.79	137.79	3.52	10	35%	20.12
3873	O2L1F2	O2L1J2	O2L1J1	PVC		347.6	4	0.012	137.79	137.79	3.52	10	35%	4.73
3586	O2L38F1	O2L38J1	M35A1	PVC		1300	6	0.01	309.12	309.12	3.51	10	35%	10.96
3882	O2L38FA2	PMP-38a	O2L38J1	Steel	100	6.2	6	0.013	309.12	309.12	3.51	10	35%	1.37
3753	O1L14F3	O1L14J3	O1L14J2	Ductile Iron		14.8	8	0.012	547.15	547.15	3.49	10	35%	0.09
1669	O2L45F1	O2L45J1	O2L12J1	PVC		161.3	6	0.01	302.14	302.14	3.43	10	34%	1.3
434	O2L18A-FB2	PMP-18A-b	O2L18AJ1	Steel	66	8.2	3	0.013	75.334	75.334	3.42	10	34%	1.94
3835	O2L5F2	O2L5J2	O2L5J1	Asbestos Cement		693.6	4	0.011	132.9	132.9	3.39	10	34%	10.76
3841	O2L5F1	O2L5J1	M3F3	Asbestos Cement		90.1	4	0.011	132.9	132.9	3.39	10	34%	1.37
3747	O2L15F2	O2L15J2	O2L15J1	PVC		27.2	3	0.01	74.29	74.29	3.37	10	34%	0.48
3749	O2L15FA2	PMP-15A	O2L15J2	Ductile Iron	78	6	3	0.012	74.29	74.29	3.37	10	34%	1.37
1813	O2L34F4	O2L34J4	O2L34J3	PVC		2328.2	12	0.01	1185.3	1185.3	3.36	10	34%	8.08
3968	O2L36F3	O2L36J2	O2L36J3	Ductile Iron		1431.2	8	0.012	-505.32	-505.32	3.23	10	32%	7.39
3809	O2L9FA1	W-9	PMP-9A	Cast iron	27	8	4	0.012	126.02	126.02	3.22	10	32%	0.44
3810	O2L9FA2	PMP-9A	O2L9J1	Cast iron	76	6.1	4	0.012	126.02	126.02	3.22	10	32%	1.23
3815	O2L9F1	O2L9J1	O2L32J1	Ductile Iron		555	4	0.012	126.02	126.02	3.22	10	32%	6.4
489	O2L4F5	O2L4J5	O2L4J4	Ductile Iron		30.3	4	0.012	124.51	124.51	3.18	10	32%	0.34
3085	O2L4FA2	PMP-4A	O2L4J5	Ductile Iron	105	7.3	4	0.012	124.51	124.51	3.18	10	32%	1.18

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3851	O2L4F4	O2L4J4	O2L4J3	Asbestos Cement		752.6	4	0.011	124.51	124.51	3.18	10	32%	10.12
3854	O2L4F3	O2L4J3	O2L4J2	Asbestos Cement		1169.3	4	0.011	124.51	124.51	3.18	10	32%	15.73
3856	O2L4F2	O2L4J2	O2L4J1	Asbestos Cement		374.9	4	0.011	124.51	124.51	3.18	10	32%	5.04
3858	O2L4F1	O2L4J1	O2L5J2	Asbestos Cement		42	4	0.011	124.51	124.51	3.18	10	32%	0.57
1490	O2L39F1	O2L39J1	M35A1	PVC		751.7	2	0.01	29.869	29.869	3.05	10	31%	17.64
3890	O2L39FA2	PMP-39a	O2L39J1	Ductile Iron	25	9	2	0.012	29.869	29.869	3.05	10	31%	0.59
199	O2L7F1	O2L1J1	O2L7J1	Cast iron		671.6	8	0.012	-453.81	-453.81	2.9	10	29%	2.84
1140	O1L42F1	O1L42J1	M14C1	Ductile Iron		1075.3	4	0.012	111.61	111.61	2.85	10	29%	9.9
3603	O2L16F1	O2L16J1	O2L41J1	Ductile Iron		496.3	8	0.013	435.92	435.92	2.78	10	28%	1.95
3604	O2L41F1	O2L41J1	O2L22J1	Ductile Iron		785.4	8	0.013	435.92	435.92	2.78	10	28%	3.08
3775	O2L12FB2	PMP-12B	O2L12J2	PVC	90	7.2	4	0.01	107.08	107.08	2.73	10	27%	0.77
3778	O2L12F2	O2L12J2	O2L12J1	PVC		30.5	4	0.01	107.08	107.08	2.73	10	27%	0.26
3864	O2L24F1	O2L24J1	O2L7J1	Asbestos Cement		561.1	6	0.011	240.39	240.39	2.73	10	27%	3.54
3672	O2L29F1	O2L29J1	M34A11	Ductile Iron		604.4	4	0.012	104.88	104.88	2.68	10	27%	4.96
395	O2L3FA2	PMP-3A	O2L3J2	Ductile Iron	98	6.9	4	0.012	104.48	104.48	2.67	10	27%	1.9
4048	O2L3F2	O2L3J1	O2L3J2	Cast iron		1248	4	0.012	-104.48	-104.48	2.67	10	27%	14.27
1668	O2L33F1	O2L33J1	O2L45J1	PVC		820.9	6	0.01	215.9	215.9	2.45	10	25%	3.56
143	O2L18AFB2	PMP-18B	O2L18J3	Ductile Iron	66	10.5	3	0.01	51.242	51.242	2.33	10	23%	0.58
3711	O2L23F1	O2L23F1	O2L24J1	PVC		474	4	0.01	89.097	89.097	2.27	10	23%	2.88
3451	O1L37F1	M14D4	O1L37J1	PVC		61.8	4	0.01	-88.302	-88.302	2.25	10	23%	0.37
3452	O1L37FA1	PMP-37a	O1L37J1	Steel	78	8.8	4	0.013	88.302	88.302	2.25	10	23%	0.76
466	O1L17FB1	PMP-17B	O1L17J4		155	8.3	8	0.012	333.17	333.17	2.13	10	21%	0.37
468	O1L17F3	O1L17J4	O1L17J3	Steel		7.9	8	0.013	333.17	333.17	2.13	10	21%	0.03
2441	O1L17F1	O1L17J1	O1L14J2	Ductile Iron		255.7	8	0.012	333.17	333.17	2.13	10	21%	0.61
2460	O1L17F2	O1L17J1	O1L17J2	Ductile Iron		1095.9	8	0.012	-333.17	-333.17	2.13	10	21%	2.61
2462	O1L17F2	O1L17J2	O1L17J3	PVC		1271	8	0.01	-333.17	-333.17	2.13	10	21%	3.03
393	O2L24FA2	PMP-24A	O2L24J2	Steel	84	8.3	3	0.013	46.812	46.812	2.12	10	21%	1.02
3708	O2L24F2	O2L24J2	O2L24J1	PVC		542.3	3	0.01	46.812	46.812	2.12	10	21%	4.06
407	O2L18A-FA2	PMP-18A	O2L18J3	Steel	66	10.8	3	0.013	46.617	46.617	2.12	10	21%	0.8

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3785	O2L11FA2	PMP-11A	O2L11J1	Ductile Iron	77	5.9	3	0.012	46.023	46.023	2.09	10	21%	0.56
3788	O2L11F2	O2L11J1	O2L11J1	Ductile Iron		41.5	3	0.012	46.023	46.023	2.09	10	21%	0.3
1783	O2L30FA2	PMP-30A	O2L30J1	PVC	77	8.8	3	0.01	43.798	43.798	1.99	10	20%	1.12
3659	O2L30F1	O2L30J1	O2L47J1	PVC		413.1	3	0.01	43.798	43.798	1.99	10	20%	2.73
4472	O2L48FA2	PMP-48A	O2L48J1	PVC	70	6.2	3	0.01	41.077	41.077	1.86	10	19%	0.41
214	O2L15F1	O2L15J1	O2L33J1	PVC		1180.6	6	0.01	159.37	159.37	1.81	10	18%	2.92
3486	O2L19FB1	W-19	PMP-19B	Steel	0.1	7.7	20	0.013	1747.5	1747.5	1.78	10	18%	0
3762	O2L13FA1	W-13	PMP-13A	Ductile Iron	16	7.3	3	0.012	32.293	32.293	1.47	10	15%	0.06
517	O2L36FA2	PMP-36A	O2L36J4	Steel	90	7.2	4	0.013	50.074	50.074	1.28	10	13%	0.31
3614	O2L36F4	O2L36J4	O2L36J3	Ductile Iron		1394.3	4	0.012	50.074	50.074	1.28	10	13%	2.91
3862	O2L3F1	O2L3J1	O2L24J1	Cast iron		2688.9	6	0.012	104.48	104.48	1.19	10	12%	4.27
506	O2L34FA1	W-34	PMP-34A	Ductile Iron	0.1	10.6	20	0.012	1150.9	1150.9	1.18	10	12%	0
3663	O2L31F1	O2L31J1	O2L16J1	Ductile Iron		653.2	8	0.012	166.88	166.88	1.07	10	11%	0.43
213	O2L13F1	O2L13J1	O2L15J1			584.2	6	0.013	85.077	85.077	0.97	10	10%	0.54
3764	O2L13FA2	PMP-13A	O2L13J2	Ductile Iron	69	8.5	4	0.012	32.293	32.293	0.82	10	8%	0.06
3767	O2L13F2	O2L13J2	O2L13J1	Ductile Iron		24.7	4	0.012	32.293	32.293	0.82	10	8%	0.02
212	O2L44F1	O1L44J1	O2L13J1	PVC		1303.2	6	0.01	52.785	52.785	0.6	10	6%	0.42
3881	O2L38FA1	W-38	PMP-38a	Steel	0.1	7.5	20	0.013	309.12	309.12	0.32	10	3%	0
3081	O2L16FA1	W-16	PMP-16A	Steel	1	8	20	0.013	269.04	269.04	0.27	10	3%	0
3662	O2L19F1	O2L34J4	O2L31J1	Cast iron		48.8	8	0.013	-34.375	-34.375	0.22	10	2%	0
3819	O2L7FA1	W-7	PMP-7A	Ductile Iron	1.1	7.1	20	0.012	213.42	213.42	0.22	10	2%	0
3925	O2L46FA1	W-46	PMP-46a	PVC	0.1	7.6	10	0.01	53.324	53.324	0.22	10	2%	0
3694	O2L44FA1	W-44	PMP-44a	PVC	0.1	8.1	10	0.01	52.785	52.785	0.22	10	2%	0
3832	O2L5FA2	PMP-5A	O2L5J3	Ductile Iron	93	6.7	4	0.012	8.3964	8.3964	0.21	10	2%	0.01
3834	O2L5F3	O2L5J3	O2L5J2	Ductile Iron		16.9	4	0.012	8.3964	8.3964	0.21	10	2%	0
1743	O2L31FA1	W-31	PMP-31A	Ductile Iron	0.1	8.6	20	0.012	201.26	201.26	0.21	10	2%	0
1690	02L23FA1	W-23	PMP-22A	Ductile Iron	1	8.7	20	0.012	183.34	183.34	0.19	10	2%	0
3525	O2L35FA1	W-35	PMP-35A	Steel	0.1	7.2	20	0.013	171.8	171.8	0.18	10	2%	0
417	O2L2FA1	W-2	PMP-2A	Steel	0.1	8.7	20	0.013	161.96	161.96	0.17	10	2%	0

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1791	O2L26FB1	W-26	PMP-26B	PVC	0.1	7.7	20	0.01	159.28	159.28	0.16	10	2%	0
445	O2L6FA1	W-6	PMP-6A	Ductile Iron	0.1	7.5	20	0.012	153.95	153.95	0.16	10	2%	0
3481	O1L40FA2	W-40	PMP-40a	PVC	0.1	9.8	20	0.01	139.62	139.62	0.14	10	1%	0
3870	O2L1FA1	W-1	PMP-1A	Steel	0.1	7.5	20	0.013	137.79	137.79	0.14	10	1%	0
3849	O2L4FA1	W-4	PMP-4A	Ductile Iron	0.1	8.2	20	0.012	124.51	124.51	0.13	10	1%	0
3879	O1L42FB1	W-42	PMP-42a		1	7	20	0.013	111.61	111.61	0.11	10	1%	0
3773	O2L12FB1	W-12	PMP-12B	Ductile Iron	0.1	9	20	0.012	107.08	107.08	0.11	10	1%	0
3090	O2L29FA1	W-29	PMP-29A	PVC	0.1	11.1	20	0.01	104.88	104.88	0.11	10	1%	0
373	O2L3FA1	W-3	PMP-3A	Ductile Iron	0.1	7.8	20	0.012	104.48	104.48	0.11	10	1%	0
389	O2L23FB1	W-23	PMP-23B	Steel	1	8.2	20	0.013	89.097	89.097	0.09	10	1%	0
3453	O1L37FA2	W-37	PMP-37a	PVC	0.1	9.7	20	0.01	88.302	88.302	0.09	10	1%	0
3918	O2L45FA1	W-45	PMP-45a	PVC	0.1	7.1	20	0.01	86.238	86.238	0.09	10	1%	0
426	O2L25FA1	W-25	PMP-25A	Ductile Iron	0.1	7.7	20	0.012	82.961	82.961	0.08	10	1%	0
432	O2L18A-FA1	W-18A	PMP-18A-b	Steel	0.1	13.2	20	0.013	75.334	75.334	0.08	10	1%	0
3961	O2L15FA1	W-15	PMP-15A	Ductile Iron		7.2	20	0.012	74.29	74.29	0.08	10	1%	0
4405	O2L47FB1	W-47	PMP-47B	PVC	0.1	9.5	20	0.01	56.842	56.842	0.06	10	1%	0
3943	O2L11FA1	W-33	PMP-33A	Ductile Iron	0.1	6.7	20	0.012	56.531	56.531	0.06	10	1%	0
149	O2L18FB1	W-18	PMP-18B	Ductile Iron	0.1	8.9	20	0.01	51.242	51.242	0.05	10	1%	0
516	O2L36FA1	W-36	PMP-36A	Steel	0.1	8.2	20	0.013	50.074	50.074	0.05	10	1%	0
392	O2L24FA1	W-24	PMP-24A	PVC	0.1	9.1	20	0.01	46.812	46.812	0.05	10	1%	0
406	O2L18FA1	W-18	PMP-18A	Steel	0.1	8.8	20	0.013	46.617	46.617	0.05	10	1%	0
3783	O2L11FA1	W-11	PMP-11A	Ductile Iron	0.1	8.4	20	0.012	46.023	46.023	0.05	10	1%	0
1782	O2L30FA1	W-30	PMP-30A	Cast iron	0.1	8	20	0.012	43.798	43.798	0.04	10	0%	0
3974	O1L43FA2	W-35	PMP-43a	PVC	0.1	7.6	20	0.01	42.611	42.611	0.04	10	0%	0
4471	O2L48FA1	W-48	PMP-48A	PVC	0.1	8.1	20	0.01	41.077	41.077	0.04	10	0%	0
3889	O2L39FA1	W-39	PMP-39a	PVC	0.1	8.2	20	0.01	29.869	29.869	0.03	10	0%	0
3831	O2L5FA1	W-5	PMP-5A	Ductile Iron	0.1	7.6	20	0.012	8.3964	8.3964	0.01	10	0%	0
3605	O2L41F2	O2L41J2	O2L41J1			192.7	1.3	0.013	-0.00012	-0.00012	0	10	0%	0
3899	O2L41FA2	PMP-41a	O2L41J2	PVC	25	7	2	0.01	-0.00012	-0.00012	0	10	0%	0

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3797	O2L10F3	O2L10J3	O2L10J2	Ductile Iron		37.5	3	0.012	-1.95E-05	-1.95E-05	0	10	0%	0
2437	NA	O2L4J4	na			163.1	4	0.011	3.19E-05	3.19E-05	0	10	0%	0
3898	O2L41FA1	W-41	PMP-41a	PVC	0.1	7.2	20	0.01	-0.00012	-0.00012	0	10	0%	0
2433	NA	M3F3	na			97.3	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
2435	NA	na	na			126.6	4	0.011	1.99E-06	1.99E-06	0	10	0%	0
3793	O2L10FA1	W-10	PMP-10A	Ductile Iron	0.1	8.3	20	0.012	-1.61E-05	-1.61E-05	0	10	0%	0
3795	O2L10FA2	PMP-10A	O2L10J3	Ductile Iron	99	6.6	3	0.012	0	0	0	10	0%	0
142	O2L24FB1	W-24	PMP-24B	Ductile Iron	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
150	O2L25FB2	PMP-25B	O2L25J1	Ductile Iron	84	9.2	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
151	O2L24FB2	PMP-24B	O2L24J2	Steel	84	7.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
152	O2L22FB1	W-23	PMP-22B	Ductile Iron	1	7.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
165	O1L17FA2	W-17	PMP-17A	Steel	21.1	6.7	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
166	O2L22FB2	PMP-22B	O2L22J2	Ductile Iron	112	7.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
168	O1L14FB2	W-14	PMP-14B	Ductile Iron	44	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
170	O2L34FC1	W-34	PMP-34C	Ductile Iron	0.1	6.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
177	O2L36FB1	W-36	PMP-36B	Ductile Iron	0.1	9.2	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
184	O2L36FB2	PMP-36B	O2L36J4	Ductile Iron	90	7.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
374	O2L3FB1	W-3	PMP-3B	Ductile Iron	0.1	8.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
386	O2L23FA1	W-23	PMP-23A	Steel	1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
387	O2L23FA2	PMP-23A	O2L23F1	Steel	84	9	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
394	O2L3FB2	PMP-3B	O2L3J2	Ductile Iron	98	8.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
401	O2L1FB2	PMP-1B	O2L1J2	Ductile Iron	10	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
413	O2L2FB1	W-2	PMP-2B	Steel	0.1	9.4	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
415	O2L2FB2	PMP-2B	O2L2J1	Ductile Iron	112	9.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
435	O2L18A-FA2	PMP-18A-a	O2L18AJ1	Steel	66	8.3	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
436	O2L18A-FA1	PMP-18A-a	W-18A	Steel	0.1	8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
443	O2L6FB2	PMP-6B	O2L6J1	PVC	74	6.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
444	O2L6FB1	W-6	PMP-6B	Ductile Iron	0.1	7	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
467	O1L17FA1	PMP-17A	O1L17J4	Steel	155	8.3	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
473	O1L14FB1	PMP-14B	O1L14J3	Steel	134	7.6	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
486	O2L4FB2	PMP4B	O2L4J5	Ductile Iron	105	6.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
487	O2L4FB1	W-4	PMP4B	Ductile Iron	0.1	8.5	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
492	O2L5FB1	W-5	PMP-5B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
494	O2L5FB2	PMP-5B	O2L5J3	Ductile Iron	93	5.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
513	O2F32FA1	W-32	PMP-32A	Ductile Iron	16.1	9.8	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
514	O2L32FA2	PMP-32A	O2L32J2	Ductile Iron	101	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
526	O2L34FC2	PMP-34C	O2L34J6	Ductile Iron	154	7.8	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1693	O2L34FB1	W-34	PMP-34B	Ductile Iron	0.1	8.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1694	O2L34FB2	PMP-34B	O2L34J6	Ductile Iron	154	9.4	8	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1745	O2L31FB2	PMP-31B	O2L31J2	Steel	77	9.6	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1746	O2L31FB1	W-31	PMP-31B	Ductile Iron	0.1	8.1	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1784	O2L30FB2	PMP-30B	O2L30J1	PVC	77	8.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1785	O2L30FB1	W-30	PMP-30B	Cast iron	0.1	7.4	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1793	O2L26FA2	PMP-26A	O2L26J1	Steel	79	6.1	3	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
1794	O2L26FA1	W-26	PMP-26A	PVC	1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2454	NA	J-97	na			612.3	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
2466	NA	na	J-97			2074.5	4	0.011	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3078	O2L16FB2	PMP-16B	O2L16J2	Ductile Iron	77	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3082	O2L16FB1	W-16	PMP-16B	Steel	1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3086	O2L29FB1	W-29	PMP-29B	PVC	0.1	10	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3088	O2L29FB2	PMP-29B	O2L29J2	PVC	78	11.7	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3454	O1L37FB1	PMP-37b	O1L37J1	Ductile Iron	78	6.4	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3455	O1L37FB2	W-37	PMP-37b		0.1	8.8	10	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3483	O1L40FB2	W-40	PMP-40b	PVC	0.1	12.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3484	O1L40FB1	PMP-40b	O1L40J1	Ductile Iron	70	10	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3487	O2L19FA1	W-19	PMP-19A	Steel	0.1	7.9	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3493	O2L19FA2	PMP-19A	O1L34J2	Steel	341	8.5	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3566	O2L38FB1	W-38	PMP-38b	Steel	0.1	8.3	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3568	O2L38FB2	PMP-38b	O2L38J1	Steel	100	7.3	6	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3651	O2L34BYEPAS	O2L36J1	O2L34J5	Ductile Iron		15.2	8	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3696	O2L44FB1	W-44	PMP-44b	PVC	0.1	8.3	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3697	O2L44FB2	PMP-44b	O1L44J2		25	6.8	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3744	O2L15FB2	PMP-15B	O2L15J2	Ductile Iron	78	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3768	O2L13FB1	W-13	PMP-13B	Ductile Iron	16	9.1	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3769	O2L13FB2	PMP-13B	O2L13J2	Ductile Iron	69	9.6	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3779	O2L12FA1	W-12	PMP-12A	Ductile Iron	0.1	8.2	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3780	O2L12FA2	PMP-12A	O2L12J2	Ductile Iron	90	7.2	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3789	O2L11FB1	W-11	PMP-11B	Ductile Iron	0.1	8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3790	O2L11FB2	PMP-11B	O2L11J1	Ductile Iron	77	6	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3799	O2L10FB1	W-10	PMP-10B	Ductile Iron	0.1	5.6	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3800	O2L10FB2	PMP-10B	O2L10J3	Ductile Iron	99	7.5	3	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3803	O2L9FB2	PMP-9B	O2L9J1	Ductile Iron	76	5.9	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3808	O2L9FB1	W-9	PMP-9B	Cast iron	27	7.7	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3817	O2L7FB1	W-7	PMP-7B	Ductile Iron	0.1	7.3	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3823	O2L7FB2	PMP-7B	O2L7J2	Ductile Iron	104	6.9	4	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3869	O2L1FB1	W-1	PMP-1B	Steel	0.1	7.2	0	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3877	O1L42FA1	W-42	PMP-42b		0.1	8.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3878	O1L42FA2	PMP-42b	O1L42J1		25	7.7	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3887	O2L39FB1	W-39	PMP-39b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3888	O2L39FB2	PMP-39b	O2L39J1	Ductile Iron	25	8.3	2	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3891	O2L35FB2	W-35	PMP-35B	Steel	0.1	7.8	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3892	O2L35FB2	PMP-35B	O2L35J2	Steel	90	6.3	4	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3896	O2L41FB1	W-41	PMP-41b	PVC	0.1	6.9	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3897	O2L41FB2	PMP-41b	O2L41J2	PVC	25	7	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3916	O2L45FB1	W-45	PMP-45b		0.1	7.1	20	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3917	O2L45FB2	PMP-45b	O2L45J2	PVC	25	7.4	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3933	O2L46FB1	W-46	PMP-46b	PVC	0.1	8.1	10	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

Model Forcemain Data Table 50 Units Per Acre Build-Out
Exhibit F3

ID	Label	Start Node	Stop Node	Material	Length (User Defined) (ft)	Length (Scaled) (ft)	Dia (in)	Manning's n	Flow (gpm)	Flow (Maximum) (gpm)	Vel (ft/s)	Max Design Vel (ft/s)	% Vel/max Vel (ft/s/ft/s)	Headloss (ft)
3934	O2L46FB2	PMP-46b	O2L46J1		25	6.2	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3937	O2L33FB1	W-33	PMP-33B	Ductile Iron	0.1	6.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3939	O2L33FB2	PMP-33B	O2L33J2	Steel	70	5.8	2	0.013	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3960	O2L15FB1	W-15	PMP-15B	Ductile Iron		7.8	20	0.012	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3972	O1L14FB2	W-35	PMP-43b	PVC	0.1	7.8	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
3973	O1L14FB1	PMP-43b	O1L43J1	PVC	25	7.3	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4408	O2L47FA1	W-47	PMP-47A	PVC	0.1	9.3	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4409	O2L47FA2	PMP-47A	O2L47J2	PVC	40	6.2	2	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4462	O2L48FB1	W-48	PMP-48B	PVC	0.1	7.5	20	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)
4464	O2L48FB2	PMP-48B	O2L48J1	PVC	70	7.1	3	0.01	(N/A)	(N/A)	(N/A)	10	#VALUE!	(N/A)

EXHIBIT F.4
PRESSURE NODE DATA TABLE REPORT

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
1341	O1L14J1	6.7	3.5	58.1	24	54.6		921853.18	600253.72	TRUE
2432	O1L14J2	6.4	0	64.8	28	64.8		920948.59	600723.96	TRUE
472	O1L14J3	6.4	8	64.9	25	56.9		920955.16	600715.27	TRUE
127	O1L17J1	6	5.3	65.4	26	60.2		920692.99	600715.98	TRUE
2461	O1L17J2	6.8	4	68	28	64		920723	599620.53	TRUE
87	O1L17J3	7.9	5	71.1	29	66.1		920698	598426.1	TRUE
465	O1L17J4	7	5	71.1	29	66.1		920705.89	598426.09	TRUE
2428	O1L34J1	8	5	23.5	8	18.5		927366.12	604992.24	TRUE
3492	O1L34J2	6.8	4.8	29.3	11	24.5		927390.3	604966.61	TRUE
3445	O1L37J1	6	3	3.5	0	0.5		919806.96	599800.73	TRUE
1337	O1L40J1	7.7	4	80.7	33	76.7		921532.85	599443.59	TRUE
1132	O1L42J1	5.8	3	7.6	2	4.6		919732.18	600929.27	TRUE
3588	O1L43J1	7.1	5	23.9	8	18.9		919610.41	600547.6	TRUE
116	O1L44J1	6.8	5.3	55.9	22	50.7		921909.68	600337.73	TRUE
1678	O1L44J2	6.2	0	64.3	28	64.3		921913.59	600458.39	TRUE
88	O2L10J1	8	4	23.6	8	19.6		927114.51	600739.53	TRUE
136	O2L10J2	7.8	5	34.2	13	29.2		926523.21	600750.87	TRUE
3794	O2L10J3	8.7	6.5	34.2	12	27.7		926513.68	600783.24	TRUE
135	O2L11J1	7.9	5.5	42.4	16	36.9		926045.89	600735.78	TRUE
3784	O2L11J1	10.5	8.5	42.7	15	34.2		926041.8	600777.04	TRUE
134	O2L12J1	8.1	6	47.2	18	41.2		925712.64	600726.09	TRUE
3774	O2L12J2	8.2	6.2	47.4	18	41.2		925711.36	600756.56	TRUE
131	O2L13J1	6.1	3	55.5	23	52.5		922967.26	600629.79	TRUE
3763	O2L13J2	6.2	4.2	55.5	22	51.3		922961.39	600653.77	TRUE
132	O2L15J1	6.8	4	55	22	51		923551.18	600648.88	TRUE
3743	O2L15J2	7	5	55.4	22	50.4		923546.24	600675.67	TRUE
107	O2L16J1	4.7	2.5	32	13	29.5		928422.75	604385.66	TRUE
2407	O2L16J2	6.7	4	49	19	45		928763.58	604418.47	TRUE
433	O2L18AJ1	4.7	2.5	12.9	4	10.4		928854.97	600361.74	TRUE
93	O2L18J1	7.7	4	12.5	4	8.5		928569.18	600970.36	TRUE

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
3726	O2L18J2	4.9	2.9	25.5	10	22.6		928608.77	599957.47	TRUE
126	O2L18J3	5.7	3	30.5	12	27.5		928767.45	599971.15	TRUE
3504	O2L19J1	8.3	7.8	25.2	8	17.4		927390.21	604973.37	TRUE
104	O2L1J1	6	4	28	10	24		928617.92	599702.49	TRUE
398	O2L1J2	6.6	4	32.7	12	28.7		928285.14	599671.66	TRUE
105	O2L22J1	6.9	4	26.9	10	22.9		927748.42	604998.77	TRUE
106	O2L22J2	5.5	3	49.4	20	46.4		927483.96	604307.21	TRUE
118	O2L23F1	4.3	1.2	37.2	16	36		929940.07	600105.19	TRUE
97	O2L24J1	6.9	4	34.4	13	30.4		929844.61	599734.74	TRUE
102	O2L24J2	5.4	3	38.4	15	35.4		929700.1	600158.28	TRUE
101	O2L25J1	4.5	2.7	14.5	5	11.8		929283.22	600655.84	TRUE
1790	O2L26J1	5.6	3.6	12.1	4	8.5		927480.33	603912.05	TRUE
2416	O2L29J1	4.5	2	6.8	2	4.8		929271.35	603049.66	TRUE
3087	O2L29J2	4.5	2	7.2	2	5.2		929284.01	603049.29	TRUE
414	O2L2J1	5.8	3.3	15.8	5	12.5		928996	598338.88	TRUE
1781	O2L30J1	3.1	1	21.8	9	20.8		929239.57	603452.81	TRUE
3661	O2L31J1	4.8	2.5	32.4	13	29.9		928446.71	603732.88	TRUE
1742	O2L31J2	6.6	4	62.3	25	58.3		929288.83	604013.67	TRUE
100	O2L32J1	5.7	4	27.9	10	23.9		928486.55	602372.06	TRUE
125	O2L32J2	5.3	4	35.5	14	31.5		927974.57	602351.14	TRUE
133	O2L33J1	8.3	6	52	20	46		924731.1	600689.88	TRUE
3938	O2L33J2	9.2	6	54.5	21	48.5		924723.91	600721.68	TRUE
3505	O2L34J2	8.1	4.6	24.1	8	19.6		927389.97	604994.04	TRUE
3498	O2L34J3	8.4	3.8	24.3	9	20.5		927411.01	604994.99	TRUE
1810	O2L34J4	4.8	4	32.4	12	28.4		928447.42	603684.11	TRUE
120	O2L34J5	5.9	2	79.9	34	77.9		928527.32	601678.68	TRUE
525	O2L34J6	5.9	10.1	81.1	31	70.9		928480.51	601676.24	TRUE
3528	O2L35J1	5.9	3	76.4	32	73.4		925402.48	604500.5	TRUE
3526	O2L35J2	0	0	76.6	33	76.6		925402.8	604509.91	TRUE
3649	O2L36J1	6	4	-3.6	-3	-7.6		928527.66	601663.48	TRUE

Model Pressure Node Data Table 50 Units Per Acre Build Out
Exhibit F4

ID	Label	Elevation (Ground) (ft)	Elevation (ft)	Hydraulic Grade (ft)	Pressure (Maximum) (psi)	Pressure Head (ft)	Notes	X (ft)	Y (ft)	Is Active?
91	O2L36J2	7.4	5	11.3	3	6.3		928541.4	601077.86	TRUE
90	O2L36J3	8.9	4	18.6	6	14.6		927111.29	601021.17	TRUE
89	O2L36J4	6.1	4	21.6	8	17.6		926952.73	602311.3	TRUE
3567	O2L38J1	6.5	3.5	10.2	3	6.7		925476.79	603270.8	TRUE
1482	O2L39J1	6.5	4	16.5	5	12.5		925456.86	603835.44	TRUE
4047	O2L3J1	6.9	5	38.6	15	33.6		929945.67	597047.95	TRUE
124	O2L3J2	6.4	5	52.9	21	47.9		928698.06	597016.74	TRUE
3602	O2L41J1	5.5	4	30	11	26		928396.68	604881.25	TRUE
1639	O2L41J2	6.4	4	30	11	26		928579.21	604893.45	TRUE
1667	O2L45J1	8.1	6	48.5	18	42.5		925551.4	600721.93	TRUE
1670	O2L45J2	9.4	7.4	55.1	21	47.7		925547.33	600761.31	TRUE
3926	O2L46J1	6.6	3	16.9	6	13.9		928915.95	600879.36	TRUE
4400	O2L47J1	2.2	1.4	19.1	8	17.7		928837.69	603432.35	TRUE
4396	O2L47J2	5	3	20.1	7	17.1		928830.59	603426.03	TRUE
4463	O2L48J1	0	0	25.8	11	25.8		926212.08	601305.88	TRUE
3855	O2L4J1	6.3	4.3	16.2	5	11.9		927327.5	597718.21	TRUE
3853	O2L4J2	6.2	4.2	21.3	7	17.1		927318.45	598092.97	TRUE
3850	O2L4J3	5.8	3.8	37	14	33.2		927280.07	599261.59	TRUE
488	O2L4J4	7	5	47.1	18	42.1		927253.84	600013.72	TRUE
484	O2L4J5	7.6	6	47.5	18	41.5		927276.73	600022.08	TRUE
3838	O2L5J1	6	4	4.9	0	0.9		927367.89	597001.13	TRUE
3857	O2L5J2	6.3	4	15.7	5	11.7		927330.85	597676.29	TRUE
493	O2L5J3	6.3	4.8	15.7	5	10.8		927336.66	597692.12	TRUE
442	O2L6J1	6.3	4	13.9	4	9.9		928475.95	600682.36	TRUE
95	O2L7J1	6.6	4	30.8	12	26.8		929283.52	599729.39	TRUE
3820	O2L7J2	6.9	4.9	31.8	12	26.9		929290.49	599699.06	TRUE
3802	O2L9J1	6.5	3.5	34.3	13	30.8		928210.32	602646.01	TRUE
2434	na	0	0	3.5	2	3.5		927359.5	596967.77	TRUE
2436	na	0	0	3.5	2	3.5		927353.71	597094.23	TRUE
2438	na	0	0	47.1	20	47.1		927262.9	599779.52	TRUE

EXHIBIT F.5
PUMP MODEL DATA TABLE REPORT

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
63	PMP-1A	TRUE	6.7	-3.8	Pump Definition - LS1	137.79	54.6	-1.8	52.8
396	PMP-1B	FALSE	6.7	-3.8	Pump Definition - LS1	(N/A)	(N/A)	(N/A)	(N/A)
412	PMP-2A	TRUE	6.3	-4.7	Pump Definition - LS2	161.96	21.5	-3.7	17.9
411	PMP-2B	FALSE	6.4	-4.7	Pump Definition - LS2	(N/A)	(N/A)	(N/A)	(N/A)
365	PMP-3A	TRUE	6.4	-2.9	Pump Definition - LS3	104.48	56.7	-1.9	54.8
62	PMP-3B	FALSE	6.4	-2.9	Pump Definition - LS3	(N/A)	(N/A)	(N/A)	(N/A)
481	PMP-4A	TRUE	7.6	-3.6	Pump Definition - LS4	124.51	50.2	-1.6	48.6
482	PMP-4B	FALSE	7.6	-3.6	Pump Definition - LS4	(N/A)	(N/A)	(N/A)	(N/A)
491	PMP-5A	TRUE	6	-6.2	Pump Definition - LS5	8.3964	19.8	-4.2	15.7
490	PMP-5B	FALSE	6	-6.2	Pump Definition - LS5	(N/A)	(N/A)	(N/A)	(N/A)
440	PMP-6A	TRUE	6.5	-2.9	Pump Definition - LS6	153.95	20.3	-1.4	18.9
441	PMP-6B	FALSE	6.5	-2.9	Pump Definition - LS6	(N/A)	(N/A)	(N/A)	(N/A)
453	PMP-7A	TRUE	6.8	-5.4	Pump Definition - LS7	213.42	38.3	-3.4	34.9
60	PMP-7B	FALSE	6.8	-5.4	Pump Definition - LS7	(N/A)	(N/A)	(N/A)	(N/A)
3801	PMP-9A	TRUE	6	3.5	Pump Definition - LS9	126.02	37	-1.4	35.6
51	PMP-9B	FALSE	6	3.5	Pump Definition - LS9	(N/A)	(N/A)	(N/A)	(N/A)
3791	PMP-10A	TRUE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	-1.93E-05	26	3.9	29.9
3792	PMP-10B	FALSE	9	-0.1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3781	PMP-11A	TRUE	10.5	3	Pump Definition - LS11	46.023	33.8	9.5	43.3
3782	PMP-11B	FALSE	10.5	3	Pump Definition - LS11	(N/A)	(N/A)	(N/A)	(N/A)
3772	PMP-12A	FALSE	8.7	2.5	Pump Definition - LS12	(N/A)	(N/A)	(N/A)	(N/A)
3771	PMP-12B	TRUE	8.7	2.5	Pump Definition - LS12	107.08	40.2	8	48.2
3760	PMP-13A	TRUE	6.7	4.7	Pump Definition - LS13	32.293	53.4	2.1	55.6
3761	PMP-13B	FALSE	6.7	4.7	Pump Definition - LS13	(N/A)	(N/A)	(N/A)	(N/A)
469	PMP-14A	TRUE	6.4	8	Pump Definition - LS14	547.15	74.8	-4.7	70.2
48	PMP-14B	FALSE	6.4	8	Pump Definition - LS14	(N/A)	(N/A)	(N/A)	(N/A)
3741	PMP-15A	TRUE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	74.29	54.3	2.5	56.8
3740	PMP-15B	FALSE	7	-0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
2476	PMP-16A	TRUE	5.9	-6.3	Pump Definition - LS16	269.04	64.3	-4.3	60

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
2481	PMP-16B	FALSE	5.9	-6.3	Pump Definition - LS16	(N/A)	(N/A)	(N/A)	(N/A)
49	PMP-17A	FALSE	7	9	Pump Definition - LS17	(N/A)	(N/A)	(N/A)	(N/A)
463	PMP-17B	TRUE	7.5	9	Pump Definition - LS17	333.17	82.8	-11.3	71.5
405	PMP-18A	TRUE	5.7	-5	Pump Definition - LS18	46.617	30.3	1	31.3
431	PMP-18A-a	FALSE	6.1	-3.5	Pump Definition - LS18a	(N/A)	(N/A)	(N/A)	(N/A)
430	PMP-18A-b	TRUE	6.1	-3.5	Pump Definition - LS18a	75.334	15.8	-1	14.8
61	PMP-18B	TRUE	5.7	-5	Pump Definition - LS18	51.242	30.1	1	31.1
539	PMP-19A	FALSE	6.8	-4.1	Pump Definition - LS19	(N/A)	(N/A)	(N/A)	(N/A)
53	PMP-19B	TRUE	6.8	-2.5	Pump Definition - LS19	1747.5	59.9	-2.1	57.8
1689	PMP-22A	TRUE	5.4	-9.7	Pump Definition - LS22	183.34	60.8	-7.2	53.6
52	PMP-22B	FALSE	5.9	-9.7	Pump Definition - LS22	(N/A)	(N/A)	(N/A)	(N/A)
59	PMP-23A	FALSE	4.5	-5.9	Pump Definition - LS23	(N/A)	(N/A)	(N/A)	(N/A)
388	PMP-23B	TRUE	-5.9	-5.9	Pump Definition - LS23	89.097	44	-3.4	40.6
391	PMP-24A	TRUE	5.6	-3.4	Pump Definition - LS24	46.812	40.3	-0.9	39.4
58	PMP-24B	FALSE	5.6	-3.4	Pump Definition - LS24	(N/A)	(N/A)	(N/A)	(N/A)
425	PMP-25A	TRUE	5.1	-5.4	Pump Definition - LS24-LS25	82.961	19.2	-2.9	16.3
57	PMP-25B	FALSE	5.1	-5.4	Pump Definition - LS24-LS25	(N/A)	(N/A)	(N/A)	(N/A)
1788	PMP-26A	FALSE	5.6	-4.2	Pump Definition - LS26	(N/A)	(N/A)	(N/A)	(N/A)
1789	PMP-26B	TRUE	5.6	-4.2	Pump Definition - LS26	159.28	25.2	-3.8	21.4
2479	PMP-29A	TRUE	4.4	-4.9	Pump Definition - LS29	104.88	18.9	-3.9	15
2480	PMP-29B	FALSE	3.5	-4.9	Pump Definition - LS29	(N/A)	(N/A)	(N/A)	(N/A)
1779	PMP-30A	TRUE	4.1	-5	Pump Definition - LS30	43.798	25.4	-2.5	22.9
1780	PMP-30B	FALSE	4.1	-5	Pump Definition - LS30	(N/A)	(N/A)	(N/A)	(N/A)
1740	PMP-31A	TRUE	6.2	-8	Pump Definition - LS31	201.26	95.7	-6.6	89.2
1741	PMP-31B	FALSE	6.2	-8	Pump Definition - LS31	(N/A)	(N/A)	(N/A)	(N/A)
508	PMP-32A	FALSE	8	10	Pump Definition - LS32	(N/A)	(N/A)	(N/A)	(N/A)
50	PMP-32B	TRUE	8	10	Pump Definition - LS32	142.69	42.3	-5.3	37
3935	PMP-33A	TRUE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	56.531	60.2	3	63.2
3936	PMP-33B	FALSE	9.2	1.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
505	PMP-34A	TRUE	6.9	-10.5	Pump Definition - LS34	1150.9	90.7	-6	84.7
1692	PMP-34B	FALSE	6.9	-10.5	Pump Definition - LS34	(N/A)	(N/A)	(N/A)	(N/A)
56	PMP-34C	FALSE	6.9	-10.5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
3522	PMP-35A	TRUE	6	-5	Pump Definition - LS35	171.8	81	-1.4	79.6
3521	PMP-35B	FALSE	6	-5	Pump Definition - LS35	(N/A)	(N/A)	(N/A)	(N/A)
515	PMP-36A	TRUE	6.7	-8.5	Pump Definition - LS36	50.074	27.4	-5.5	21.9
64	PMP-36B	FALSE	7.5	-8.5	Pump Definition - LS36	(N/A)	(N/A)	(N/A)	(N/A)
3443	PMP-37a	TRUE	6.3	-7	Pump Definition - LS37	88.302	8.9	-4.7	4.3
3444	PMP-37b	FALSE	6.5	-7	Pump Definition - LS37	(N/A)	(N/A)	(N/A)	(N/A)
3565	PMP-38a	TRUE	6.5	-15.4	Pump Definition - LS38	309.12	21.7	-10.2	11.5
3564	PMP-38b	FALSE	6.5	-15.4	Pump Definition - LS38	(N/A)	(N/A)	(N/A)	(N/A)
3886	PMP-39a	TRUE	6	-5	Pump Definition - LS39	29.869	15.1	2	17.1
3885	PMP-39b	FALSE	6	-5	Pump Definition - LS39	(N/A)	(N/A)	(N/A)	(N/A)
3479	PMP-40a	TRUE	8	5	Pump Definition - LS40	139.62	86.6	-5	81.6
3480	PMP-40b	FALSE	8	5	Pump Definition - LS40	(N/A)	(N/A)	(N/A)	(N/A)
3895	PMP-41a	TRUE	6.5	0	Pump Definition - LS10-LS42-LS43 Privite	0	0	4	30
3894	PMP-41b	FALSE	0	6.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3875	PMP-42a	TRUE	5	0	Pump Definition - LS10-LS42-LS43 Privite	111.61	11.8	2.5	14.3
3876	PMP-42b	FALSE	5	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3970	PMP-43a	TRUE	9.4	1	Pump Definition - LS10-LS42-LS43 Privite	42.611	21	4	25
3971	PMP-43b	FALSE	7.4	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3693	PMP-44a	TRUE	6.8	0.5	Pump Definition - LS15-LS33-LS44-LS45	52.785	61.5	4.5	66
3692	PMP-44b	FALSE	6.7	0.5	Pump Definition - LS15-LS33-LS44-LS45	(N/A)	(N/A)	(N/A)	(N/A)
3915	PMP-45a	TRUE	9.3	3.5	Pump Definition - LS15-LS33-LS44-LS45	86.238	50.3	9	59.3
3914	PMP-45b	FALSE	9.3	3.5	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
3923	PMP-46a	TRUE	6.5	-3	Pump Definition - LS10-LS42-LS43 Privite	53.324	19.7	-1	18.7
3924	PMP-46b	FALSE	6.3	-3	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4407	PMP-47A	FALSE	5	1	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)
4404	PMP-47B	TRUE	5	1	Pump Definition - LS10-LS42-LS43 Privite	56.842	19.2	4	23.2

Model Pump Data Tabe 50 Unit Per Acre Build-Out
Exhibit F5

ID	Label	Is Active?	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Pump Definition	Flow (Pump) (gpm)	Head (Pump) (ft)	Hydraulic Grade (Upstream) (ft)	Hydraulic Grade (Downstream) (ft)
4460	PMP-48A	TRUE	0	0	Pump Definition - LS10-LS42-LS43 Privite	41.077	21.2	5	26.2
4461	PMP-48B	FALSE	0	0	Pump Definition - LS10-LS42-LS43 Privite	(N/A)	(N/A)	(N/A)	(N/A)

EXHIBIT F.6
OUTFALL DATA TABLE REPORT

Model Outfall Data Table 50 Units Per Acre
Exhibit F6

ID	Label	Elev (Grd) (ft)	Elev (Invt) (ft)	Boundary Condition Type	Elev (User Defined Tailwater) (ft)	Hydraulic Grade (ft)	Flow (Total Out) (gpm)	Notes
1797	O-1	6.8	3.5	User Defined Tailwater	58	58	1019.9	Measured 58 ft of Head or 25 psi at 12:00 PM Tuesday August 2023
3488	O-2	6.5	3.5	User Defined Tailwater	23	23	3723.9	Measured 10 psi or 23 feet of Head on monday 6/12/2023

EXHIBIT G
PUMP INVENTORY TABLE

Pump Inventory Table

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Park Lake Estates	Lake Shore Drive	Pub	**LS #1**	1	Sulzer	xfp100E-CB1.5-PE56/4-E-60FM	0016055 42/2012	3	230	7.5	19.8	1757	713	65.6	2022	7.68	262	42	BPI Unitron Controls	Pump Definition - 32 (PMP-45)LS1
Park Lake Estates	Lake Shore Drive	Pub	**LS #1**	2	Sulzer	xfp100E-CB1.5-PE56/4-E-60FM	0016055 42/2012	3	230	7.5	19.8	1757	713	65.6	2022	7.68	262	42	BPI Unitron Controls	Pump Definition - 32 (PMP-45)LS1
Park Lake Estates	Marine Circle	Pub	**LS#2**	1	Sulzer	XFP80C-CB1.2-PE20/6-C-60FM	0023652 40/2013	3	230	2.7	8.4	1150	500	9	2013	7.68	140	18	Champion	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	Marine Circle	Pub	**LS#2**	2	Sulzer	XFP80C-CB1.2-PE20/6-C-60FM	0021027 40/2013	3	230	2.7	8.4	1150	500	9	2013	7.68	140	18	Champion	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	West Lake Shore Dr	Pub	**LS#3**	1	Sulzer	ABSXFP-PE2	300698673	3	230	7.5		1757 MAX	713	66	2022	0.195	275	40	UNITRON	Pump Definition - 6 (PMP-32)LS2
Park Lake Estates	West Lake Shore Dr	Pub	**LS#3**	2	ABS	XFP-PE2-100E-CB1.5-PE56_4EFM	300688962	3	230	7.5			713	66	2021	0.195	275	40	UNITRON	Pump Definition - 6 (PMP-32)LS2
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#4**	1	ABS	AFPK1041M46/4EX	6980	3	230	6.2	17.1	1750	780	59		0.2	132	46	Champion	Pump Definition - 16 (PMP-46)LS4
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#4**	2	ABS	AFPK1041 M46/4EX	69803	3	230	6.2	17.1		780	59			132	46	Champion	Pump Definition - 16 (PMP-46)LS5
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#5**	1	ABS	AFPK0841.4-M18/4FW	0091195	1	230	2.7	12	1146	305	20	2007	152mm	95	12	Champion	Pump Definition - 18 (PMP-38)LS5
Pembroke Park Lake	West Lake Shore Dr	Pub	**LS#5**	2	Liberty	XFP80CB1.4PE 20/6 LSG202M-C	124QWC	1	230	2.4	12.1	1750	305	20	2019	152mm	95	12	Champion	Pump Definition - 18 (PMP-38)LS6

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
La Siesta	Lake Shore Drive	Pub	**LS#6**	1	ABS	20-35 MOBILE HOME / AFPK0841.3M18/4EX		3			1		410	28			92	20	Champion	Pump Definition-4-LS6
La Siesta	Lake Shore Drive	Pub	**LS#6**	2	ABS	20-35 MOBILE HOME / AFPK0841.3M18/4EX		3		2.4			410	28			92	20	Champion	Pump Definition-4-LS6
Lone Pine	10th St.	Pub	**LS#7**	1	Sulzer	XFP100C-CB1_4-pe35/4-60HZ		3	230		13.7		635	49			210	28	Champion	Definition - 26 (PMP-42)LS7
Lone Pine	10th St.	Pub	**LS#7**	2	Sulzer	XFP100C-CB1_4-pe35/4-60HZ		3	230	4.7			635	49			210	28	Champion	Definition - 26 (PMP-42)LS7
removed	removed	Pub	**LS#8**	1																
removed	removed	Pub	**LS#8**	2																
ParkRD	Park Rd	Private	**LS#9**	1	Gorman-Rupp	T3A-B		3	240	5		1250	418	45			150	37	Gorman-Rupp	Pump Definition-5-LS-9
Park RD	Park Rd	Private	**LS#9**	2	Gorman-Rupp	T3A-B		3	240	5		1250	418	25			150	37	Gorman-Rupp	Pump Definition-5-LS-9
SW 30th Street	SW 30th St	Private	**LS#10**	1	Goulds	WS0512BF	WS0512BF	1	230	0.5	7.3	1750	160	25		5	25	23		Pump Definition - 10 (PMP-34)
SW 30th Street	SW 30th St	Private	**LS#10**	2	Goulds	WS0512BF	WS0512BF	1	230	0.5	7.3	1750	160	25		5	25	23		Pump Definition - 10 (PMP-34)
SW 30th Street	SW 30th St	Private	**LS#11**	1	HYDromatic	30 MP	2248-569	NA	NA	NA	NA	1800	NA	NA	NA	NA	NA	NA	NA	PMP11A
SW 30th Street	SW 30th St	Private	**LS#11**	2	HYDromatic	31 MP	2248-570	NA	NA	NA	NA	1800	NA	NA	NA	NA	NA	NA	NA	PMP11B
SW 30th Street	SW 30th St	Private	**LS#12**	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP12A
SW 30th Street	SW 30th St	Private	**LS#12**	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP12B
SW 30th Street	SW 30th St	Pub	**LS#13**	1	Gorman-Rupp	T4A3-B	1561914	3	230	10	24.4	1760	NA	60	NA	NA	NA	NA	Fair	PMP13A
SW 30th Street	SW 30th St	Pub	**LS#13**	2	Gorman-Rupp	T4A3-B	1561914	3	230	10	24.4	1760	NA	60	NA	NA	NA	NA	Fair	PMP13B
Peninsula	Hallandale Beach Blvd	Pub	**LS#14**	1	Gorman-Rupp	T6A60SB	1753320	3	240	30	125	1350	540	75	NA	NA	NA	NA	NA	PMP14A

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Peninsula	Hallandale Beach Blvd	Pub	**LS#14**	2	Gorman-Rupp	T6A60SB	1753320	3	240	30	125	1350	540	75	NA	NA	NA	NA	NA	PMP14B
SW 30th Street	SW 30th St	Pub	**LS#15**	1	Goulds	WS0712BHF	520150	3	230	0.75	12.6	Na	200	80	NA	NA	74	54	NA	PMP15A
No Second pump			**LS#15**																	
Alabama Street	Alabama St	Pub	**LS#16**	1	ABS	AFPK1049 M75/4	M75/4	3	230	10.1	26.1	1750	850	90	NA	NA	NA	NA	NA	PMP16A
Alabama Street	Alabama St	Pub	**LS#16**	2	Sulzer	AFPK1049 M75/4	M75/5	3	230	10	26.1	1750	850	90	NA	NA	NA	NA	NA	PMP16B
SW 52nd Ave.	52nd Ave	Pub	**LS#17**	1	Gorman-Rupp	T6A3S-B/F	1760411	3	230	30	125	1350	1400	90	NA	NA	NA	NA	NA	PMP17A
SW 52nd Ave.	52rd Ave	Pub	**LS#17**	2	Gorman-Rupp	T6A3S-B/F	1760411	3	230	30	125	1350	1400	90	NA	NA	NA	NA	NA	PMP17B
Holiday RV Park	Holliday Park Ave	Pub	**LS#18**	1	ABS	S10/4W.02 06087144	00318852	1	230	1.3	6.5	1700	36	32	NA	NA	NA	NA	NA	PMP18A
Holiday RV Park	Holliday Park Ave	Pub	**LS#18**	2	ABS	S10/4W.02 06087144	00318852	1	230	1.3	6.5	1700	36	32	NA	NA	NA	NA	NA	PMP18B
Holiday RV Park	SW 6th St	Pub	**LS#18 A**	1	Hydromatic	S3HRC300M2-2	S00742073	1	230	3	17.9	3450	200	24	NA	4	85	9	UNITRON	PMP18A-A
Holiday RV Park	SW 6th St	Pub	**LS#18 A**	2	Hydromatic	S3HRC300M2-2	S00742074	1	230	3	17.9	3450	200	24	NA	4	85	9	UNITRON	PMP18A-A
Coca Cola	Pembroke Rd	Pub	**LS#19**	1	Sulzer	XFP15OG-CB1.7-PE185/4	2773859	3	460	24.8	32.7	1750	1500	95	NA	NA	880	58	SULZER	PMP-19A
Coca Cola	Pembroke Rd	Pub	**LS#19**	2	ABS	AFPK1547 ME185/4	22166	3	460	24.8	32.7	1750	1500	95	NA	NA	880	58	SULZER	PMP-19B
removed	removed		**LS#20**	1		Does not exist														
removed	removed		**LS#20**	2		Does not exist														
removed	removed		**LS#21**	1		Old Master LS DOES NOT EXIST														
removed	removed		**LS#21**	2		Old Master LS DOES NOT EXIST														
Lakeview Park	1st St.	Pub	**LS#22**	1	Sulzer	XFP-PE2-100E-CB1.4-PE75_4E-FM	300357575	3	230	10	20	1762	450	85	NA	0.217	175	60	SULZER	PMP-22A
Lakeview Park	1st St.	Pub	**LS#22**	2	Sulzer	XFP-P2-100E-CB1.4-PE75_4E-FM	300698704	3	230	10	20	1762	450	85	NA	0.217	175	60	SULZER	PMP-22B
SW 30th Ave	SW 30th AVE	Pub	**LS#23**	1	ABS	AFPK1041.3M35/4e	92942	3	230	4.7	13.8	1780	700	44	NA	0.3	78	41	CHAMPION	PMP-23A
SW 30th Ave	SW 30th AVE	Pub	**LS#23**	2	ABS	AFPK1041.8M 35/4E	92942	3	230	4.7	13.8	1780	700	44	NA	0.3	78	41	CHAMPION	PMP-23B
Green Acres	7th St	Pub	**LS#24**	1	ABS	AFPK0841 M1.5/6EX	91275	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-24A
Green Acres	7th St	Pub	**LS#24**	2	ABS	AFPK0841M1.5/6EX	91276	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-24B

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Green Acres	4th St	Pub	**LS#25**	1	ABS	AFPK0841 M1.5/6	0891283	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-25A
Green Acres	4th St	Pub	**LS#25**	2	ABS	AFPK0841 M1.5/6	0891282	3	230	2	7.4	1180	360	40		0.2	78	41	CHAMPION	PMP-25B
Lakeview Park	5th St	Pub	**LS#26**	1	ABS	AFPK0841 M1.8/4EX	300466132	1	230	2.4	12.1	1750	560	28	8/17/2022	NA	63	12	CHAMPION	PMP-26A
Lakeview Park	6th St	Pub	**LS#26**	2	Sulzer	XFP-PE1-100C-C1.4-PE20-6C-FM	3055801	1	230	2.4	12.1	1750	560	23	8/18/2022	NA	63	12	CHAMPION	PMP-26B
removed	removed	NA	**LS#27**	1	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-27A
removed	removed	NA	**LS#27**	2	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-27B
removed	removed	NA	**LS#28**	1	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-28A
removed	removed	NA	**LS#28**	2	NA	Does Not Exist	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-28B
Bamboo Park	24th St	Pub	**LS#29**	1	Sulzer	XFP-PE1-100C-CB1.4-PE20_6WC-FM	3135037	1	230	2.4	12	1146	471	23	2/27/2023	7.09	137	17	CHAMPION	PMP-29A
Bamboo Park	25th St	Pub	**LS#29**	2	Sulzer	XFP100C-1-CB1.4-PE20/6W.C.60FM	0030673	1	230	2.68	12	1146	471	23	NA	7.09	137	17	CHAMPION	PMP-29A
Bamboo Park	SW 30th CT	Pub	**LS#30**	1	ABS	AFP0831 M28/4W 60HZ	NA	3	240	2	9	NA	240	28	NA	NA	52	25	CHAMPION	PMP-30A
Bamboo Park	SW 30th Ct	Pub	**LS#30**	2	ABS	AFP0831 M28/4W 60HZ	NA	3	240	2	9	NA	240	28	NA	NA	52	25	CHAMPION	PMP-30B
SW 31st Ave	SW 31 St.	Pub	**LS#31**	1	ABS	AFPK1049.4-M75/IMP 228 mm	069195	3	480	10	26.1	NA	850	90	NA	NA	220	87	CHAMPION	PMP-30
SW 31st Ave	SW 31 St.	Pub	**LS#31**	2	SULZER	XFP100E-CB1-4a-PE75	NA	3	480	10	26.1	NA	700	120	NA	NA	325	87	CHAMPION	PMP-40B
John P Curcie	Irwin Lehmann Dr	Pub	**LS#32**	1	ABS	M35/4-12.60.03214991	0091247	3	208	4.7	15.1	1750	501	42.8	NA	NA	145	32	CHAMPION	PMP-26B
John P Curcie	Irwin Lehmann Dr	Pub	**LS#32**	2	ABS	M35/4-12.60.03214992	0091248	3	208	4.7	15.1	1750	501	42.8	NA	NA	145	32	CHAMPION	PMP-26B
SW 30th St.	SW 30th St.	Private	**LS#33**	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-26B
SW 30th St.	SW 30th St.	Private	**LS#33**	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	PMP-26B
Master Station 2800 Park Rd	Park Rd	Pub	**LS#34**	1	ABS	AFP1002ME350/4D	03574	3	480	41.5	55	1760	1500	190			975	106	CHAMPION	PMP-33A
Master Station 2800 Park Rd	Park Rd	Pub	**LS$34**	2	Sulzer	XFP-PE4-100J-CH1-PE350_4J-FM	300661886	3	460	46.9	55	1783	850	110			975	106	CHAMPION	PMP-34B

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Master Station 2800 Park Rd	Park Rd	Pub	**LS#34**	3	ABS	AFP1002ME350/4D	037575	3	480	41.5	55	1760	1500	190			975	106	CHAMPION	PMP-35C
PEMBROKE COMMERCE CENTER	PRIVATE	PUB	**LS#35**	3	EMU	FA10.33 238T 172-4/16	491894	3	230	10	28	1740	460	100			171	81	CC CONTROL	PMP-35A
PEMBROKE COMMERCE CENTER	PRIVATE	PUB	**LS#35**	3	EMU	FA10.33 238T 172-4/17	NA	3	230	10	28	1740	460	100			171	81	CC CONTROL	PMP-35B
Seneca	Senic Phase 3	Private	**LS#36**	1	WILO	FA10.51E	NA	3	230	8.5	18.7	1740	725	30			50	27	NA	PMP-36A
Seneca	Senic Phase 4	Private	**LS#36**	2	WILO	FA10.51E	NA	3	230	8.5	18.7	1740	725	30			50	27	NA	PMP-36B
SW 55th Ave	SW 55th St	Pub	**LS#37**	1	Sulzer	ABS PIRANHA S20/2	0400497	1	240	2	11.5	3400	43	109			50	27	CHAMPION	PMP-37A
SW 55th Ave	SW 55th St	Pub	**LS#37**	2	HOMA	GRP16/1	NA	1	230	1.6	8	3450	85	83			50	27	CHAMPION	PMP-37B
Senica Commerce Park	Senica Commerce Park	Pub	**LS#38**	1	FLYGT	FP 3085.183	NA	3	480	3	NA	1710	225	24			200	21	NA	PMP-38A
Senica Commerce Park	Senica Commerce Park	Pub	**LS#38**	2	FLYGT	FP 3085.184	NA	3	480	3	NA	1710	225	24			200	21	NA	PMP-38B
West Wind	SW 20th St	Private	**LS#39**	1	MYERS	WGX20-03	NA	1	220	2	NA	3450	70	130			28	26	NA	PMP-39A
West Wind	SW 20th St	Private	**LS#39**	2	MYERS	WGX20-03	NA	1	220	2	NA	3450	70	130			28	26	NA	PMP-39B
School	48th Street	Private	**LS#40**	1	EMU	FA-104	NA	3	230	7.5	NA	1740	600	100		238	139	86	NA	
School	49th Street	Private	**LS#40**	2	EMU	FA-105	NA	3	230	7.5	NA	1740	600	100		238	139	86	NA	
Service Station	SW 33 AVE	Private	**LS#41**	1	HYDromatic	SPGA GRINDER	NA	1	230	2		3500	105	135			50	105	NA	
Service Station	SW 33 AVE	Private	**LS#41**	2	HYDromatic	SPGA GRINDER	NA	1	230	2		3500	105	135			50	105	NA	
Marathon	55th AVE	Private	**LS#42**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Marathon	56th AVE	Private	**LS#42**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bar-Club	SE56th/Hallendale Bch BLVD	Private	**LS#43**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bar-Club	SE56th/Hallendale Bch BLVD	Private	**LS#43**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Location	Street	Public/ Privite	Lift Sta. #	Pump #	Manufacturer	Model	Serial #	# of Phase	Volts	HP	Amps	RPM	GPM (max)	TDH (max)	Date Installed	Impellor ϕ	Design Flow GPM	Design Head FT	Controls	Sewer CAD ID
Dollar General	SW48th St Int Hallandale	Private	**LS#44**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dollar General	SW48th St Int Hallandale	Private	**LS#44**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
APARTMENTS	3740 HALLANDALE BLVD	Private	**LS#45**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
APARTMENTS	3741 HALLANDALE BLVD	Private	**LS#46**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TOWN REC CENTER	31ST PLACE	Private	**LS#47**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TOWN REC CENTER	32nd PLACE	Private	**LS#48**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dollar General	SW48th St Int Hallandale	Private	**LS#48**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

EXHIBIT H
LETTER REQUEST FOR ADDITIONAL SEWER ALLOCATION

CRAIG A. SMITH & ASSOCIATES
A SMART-INFRASTRUCTURE COMPANY

December 11, 2023

The Town of Pembroke Park

Future Sewage Use Treatment Capacity Allocation

The Town of Pembroke Park has experienced significant growth in the last decade. Due to this growth, and projected future growth, it is in the best interest of the Town to seek additional sewage allocation above the existing allocation of 1.11 Million gallons per day as per the Large Users Agreement with the City of Hollywood. The current and projected flows are computed utilizing an analysis of the town code 13.5-52 wastewater treatment loads and the current Official Zoning Map in conjunction with the Southern Regional Wastewater Treatment Plant Large User Capacity Report.

Current Flow Projections as per Zoning:

- T-1 Trailer Park (16 units/acre) (313acres) (90 Gal/Acre) : 450,720 GPD
- RM-25 Medium High Density Multiple-Family Residential (5 Acres) (25 units/acre) (225 Gal/unit) : 28,125 GPD
- RM-16 Medium Density Multiple-Family Residential (107 Acres) (16 units/acre) (225 Gal/unit): 385,200 GPD
- Industrial (40% lot occupation) (0.1 Gal/SF) (6,324,910 SF): 632,491 GPD
- Restaurants (500 seats)(33 Gal/seat): 16,500 GPD
- Clubs (300 seats)(18 Gal/seat): 5,400 GPD
- Service Stations (94 Pumps) (90 Gal/pump): 8,460 GPD
- Laundry Mats (48 washing machines) (360 Gal per Machine): 17,280 GPD
- Churches (300 seats) (3 Gal/seat): 3,000 GPD
- Schools (2000 Students) (18/student): 36,000 GPD
- Senior Facility (300 Beds) (90 Gal/bed): 27,000 GPD
- Retail (140 acres of which 100 acres General Retail is utilized not including prior listed Retail i.e. clubs, restaurants..) (0.1 Gal/SF): 175,000 Gal/Day

The current total wastewater usage based on said analysis: 1,785,176 GPD

Future Projections:

- If half the T-1 units were to rezone from T-1 to RM-25 and additional 550,000 Gal/Day will need to be allocated to the town to service this growth.

Future Wastewater Usage based on said analysis: 2335176 GPD.

Based on this analysis the Town of Pembroke Park should seek additional Sewage Treatment Capacity Allocations.

Sincerely,

Daniel E. Shonk

Daniel Eugene Shonk P.E.

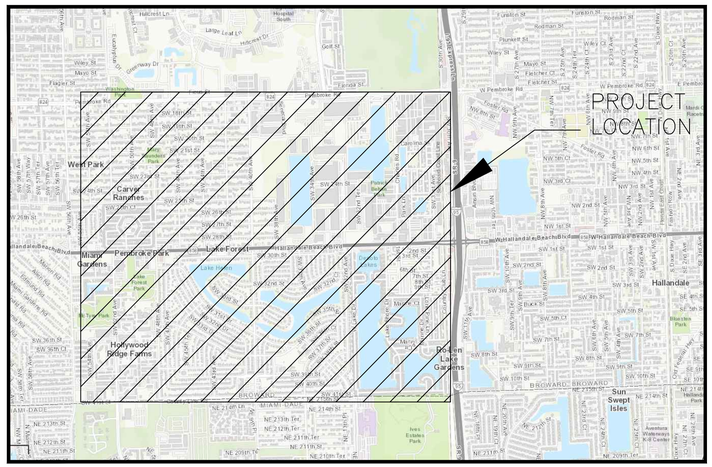


954. 782.8222
1425 E. Newport Center Drive
Deerfield Beach, FL: 33442

EXHIBIT I
2025 TOWN ATLAS

UPDATED WASTEWATER MASTER PLAN ATLAS

LOCATION MAP



TOWN OF PEMBROKE PARK
FLORIDA
The Small Town that Means Big Business

BOARD OF COMMISSIONERS

MAYOR	MAYOR ASHIRA MOHAMMED, DISTRICT 5
VICE MAYOR	ERIK MORRISSETTE, DISTRICT 1
CLERK COMMISSIONER	WILLIAM R. HODGKINS, DISTRICT 2
ACTING CLERK COMMISSIONER	MUSFIKA KASHEM, DISTRICT 4
COMMISSIONER	GEOFFREY JACOBS, DISTRICT 3

SHEET INDEX

NUMBER / SHEET		DESCRIPTION
01	C-01	COVER SHEET
02	C-02	KEY SHEET & SITE PLAN
03 - 14	C-03 - C-14	MASTER PLAN ATLAS

PREPARED FOR:

TOWN OF PEMBROKE PARK

PROJECT No. 08-22-025

CRAIG A. SMITH & ASSOCIATES
CONSULTING ENGINEERS-PLANNERS-SURVEYORS
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CERTIFICATE OF AUTHORIZATION NUMBER: LB0003110

FILE NAME: 08-22-025-C-01-COVER.dwg

P:\Jobs_X\Town_Town Of\Active_Fun\08-22-025\Wastewater Master Plan\PLANS\08-22-025-C-01-COVER.dwg, 12/10/2024 8:52:45 AM, steve_li

C-03
C-04
C-05
C-06
C-07
C-08
C-09
C-10
C-11
C-12
C-13
C-14

PEMBROKE ROAD
SW 6TH ST.
SW 19TH STREET
SW 20TH CT.
SW 22ND ST.
SW 23RD ST.
SW 24TH ST.
SW 25TH ST.
SW 25TH CT.
SW 26TH ST.
SW 27TH ST.
SW 28TH ST.
SW 28TH CT.
HALLANDALE BEACH BLVD.
SW 31ST DR.
SW 31ST CT.
SW 32ND ST.
SW 32ND CT.
SW 33RD ST.
SW 34TH ST.
SW 36TH ST.
SW 36TH CT.
SW 37TH ST.
SW 38TH ST.
SW 38TH CT.
SW 39TH ST.
SW 40TH ST.
SW 40TH CT.
SW 41ST ST.
NE 215TH ST.
CAROLINA STREET
SW 31ST PL.
SW 24TH ST.
SW 30TH CT.
CHERI LN.
JOYCE LN.
GLORIA LN.
HOWARD LN.
BRYAN ROAD
HAMMOCK LN.
COUNTRY CLUB LN.
LONE PINE LN.
LONE PINE DR.
LONE PINE TERR.
MARINE DR.
MARINE DRIVE
LAKE SHORE DR.
W LAKE DR.
W LAKE SHORE DR.
S. PARK ROAD
I-95 EXPRESS
SW 31ST AVE.
SW 32ND AVE.
SW 30TH AVE.
SW 40TH AVE.
SW 42ND AVE.
SW 44TH AVE.
SW 45TH AVE.
SW 46TH AVE.
SW 47TH AVE.
SW 48TH AVE.
SW 49TH AVE.
SW 50TH AVE.
SW 50TH TERR.
SW 52ND AVE.
SW 54TH AVE.
SW 55TH AVE.
SW 56TH AVE.
SW 58TH AVE.
WILLIS RD.
ALLEN RD.
EDMUND RD.
MIAMI LAKEWAY
MARION ROAD
SW 35TH AVE.
SW 34TH AVE.
SW 37TH TERR.
SW 33RD AVE.
SW 33RD TERR.
SW 35TH TERR.
SW 36TH AVE.
SW 37TH AVE.
SW 38TH AVE.
SW 39TH AVE.
SW 30TH AVE.
SW 32ND BLVD.
FOLAN CIR.
LAKE SHORE DR.
COUNTRY CLUB LN.
HAMMOCK LN.

LS-1 LS-2 LS-3 LS-4 LS-5 LS-6 LS-7 LS-9 LS-10 LS-11 LS-12 LS-13 LS-14 LS-15 LS-16 LS-17 LS-18 LS-18A LS-19 LS-22 LS-23 LS-24 LS-25 LS-26 LS-29 LS-30 LS-31 LS-32 LS-33 LS-34 LS-35 LS-36 LS-37 LS-38 LS-39 LS-40 LS-41 LS-42 LS-43 LS-44 LS-45 LS-46 LS-47 LS-48 LS-MARINE DR.

INTERCONNECT/TIE IN/OUTFALL WITH HOLLIWOOD(02)
INTERCONNECT/TIE IN/OUTFALL WITH BROWARD COUNTY (01)

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

KEY SHEET

PROJECT NUMBER
08-22-025
02 OF 14

NOTE: OBJECTS IN THIS ATLAS WERE POSITIONED HORIZONTAL AND VERTICALLY REFERENCING: LABINS AERIAL, ASBUILT PLANS, CONSTRUCTION PLANS, COPIES OF PROPOSED PLANS, NOAA & LABINS LIDAR, PRIOR TOWN ATLAS, LINEAR INTERPOLATION, AND COUNTY PROPERTY APPRAISER SHAPE FILES.

N

0 250 500 1000
HORIZONTAL GRAPHIC SCALE



BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

LEGEND:

−1.7 ———	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1–LS14–SEWER BRANCH A–PIPE 2
01L14F2	FORCE MAIN: OUTFALL1–LS14–FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1–LS15–JUNCTION1

PROJECT NUMBER
08-22-025
03 OF 14

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP: C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14

SEE SHEET C-03 FOR CONTINUATION

SEE SHEET C-08 FOR CONTINUATION

SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

LS-26

LS-31

LS-30

LS-47

LS-29

LS-9

LS-32

CAROLINA STREET

S. PARK ROAD

I-95 EXPRESS

SW 31ST CT.

SW 31ST PL.

SW 31ST AVE.

SW 30TH CT.

SW 24TH ST.

SW 25TH ST.

SW 32ND AVE.

CHERI LN.

JOYCE LN.

GLORIA LN.

HOWARD LN.

SEE TABLE FOR INFO

OWNER REPLACED ALL 4"&6" VCP WITH 8" PVC IN BAMBOO PARADISE

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S1	02L34SA12	8"	CLAY	39'
S2	02L34SQ1	4"	CLAY	89'
S3	02L34SP1	4"	CLAY	14'
S4	02L34SA13	8"	CLAY	126'
S5	02L34SS1	4"	CLAY	86'
S6	02L34SR1	4"	CLAY	16'
S7	02L34SA14	8"	CLAY	50'

SEWER MANHOLE TABLE

NUMBER	NAME	INVERT ELEVATION
M1	M34A11	1.5'
M2	M34A12	1.7'
M3	M34Q1	3.8'
M4	M34P1	4.0'
M5	M34A13	2.1'
M6	M34S1	3.8'
M7	M34R1	3.0'
M8	M34A14	2.3'

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
04 OF 14

LEGEND:

-1.7 —— INVERT ELEVATION NAVD88

M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH

01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2

01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2

02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

FORCE MAIN PIPE

GRAVITY SEWER PIPE

GRAVITY SEWER MANHOLE

LIFT STATION WETWELL

PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP

C-03 C-04 C-05 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-13 C-14

SEE SHEET C-04 FOR CONTINUATION

SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

LS-34

LS-46

LS-6

LS-25

SW 32ND AVE.

SW 28TH ST.

SW 27TH ST.

SW 31ST AVE.

S. PARK ROAD

BRYAN ROAD

HAMMOCK LN.

LAKE SHORE DR.

W LAKE DR.

COUNTRY CLUB LN.

HALLANDALE BEACH BLVD.

TOWN BORDER

02L34BYEPASS
15 LF INACTIVE
BYE-PASS 8" DIP
02L36J1

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
05 OF 14

LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:
- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP: C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14

SEE SHEET C-05 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION



GRAVITY PIPE TABLE

NUMBER	NAME	INVERT EL.
M1	M1A4	1.0'
M2	M1S1	1.8'
M3	M1S2	2.5'
M4	M1S3	4.0'
M5	M1T1	4.0'
M6	M1U1	2.6'
M7	M1U2	3.6'
M8	M1U3	4.5'
M9	M1VI	3.0'
M10	M1V2	4.0'
M11	M1X1	4.0'
M12	M1A5	1.1'
M13	M1Y1	0.0'
M14	M1W1	4.0'
M15	M1A6	1.4'
M16	M1Z1	4.0'
M17	M1AA1	4.0'
M18	M1A7	1.7'
M19	M1BB1	2.4'
M20	M1KK1	3.5'
M21	M1KK2	4.5'
M22	M1EE1	2.9'
M23	M1EE3	4.0'
M24	M1EE2	4.0'
M25	M1BB2	3.0'
M26	M1CC1	3.5'
M27	M1DD1	4.0'
M28	M1CC2	4.0'
M29	M1BB3	3.9'
M30	M1BB4	5.1'
M31	M1A8	1.9'
M32	M1GG1	4.0'
M33	M1FF1	4.0'

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S1	02L1SS1	6"	CLAY	121'
S2	02L1SS2	4"	CLAY	60'
S3	02L1SS3	4"	CLAY	58'
S4	02L1ST1	4"	CLAY	60'
S5	02L1SU1	6"	CLAY	84'
S6	02L1SU2	4"	CLAY	53'
S7	02L1SU3	4"	CLAY	58'
S8	02L1SV1	4"	CLAY	43'
S9	02L1SV2	4"	CLAY	15'
S10	02L1SW1	4"	CLAY	99'
S11	02L1SA5	8"	CLAY	43'
S12	02L1SY1	4"	CLAY	15'
S13	02L1SX1	4"	CLAY	57'
S14	02L1SA6	8"	CLAY	73'
S15	02L1SZ1	4"	CLAY	14'
S16	02L1SAA1	4"	CLAY	65'
S17	02L1SA7	8"	CLAY	47'

GRAVITY PIPE TABLE

NUMBER	NAME	PIPE SIZE	MATERIAL	PIPE LENGTH
S18	02L1SBB1	6"	CLAY	90'
S19	02L1SKK1	4"	CLAY	48'
S20	02L1SKK2	4"	CLAY	131'
S21	02L1SEE1	4"	CLAY	49'
S22	02L1SEE3	4"	CLAY	28'
S23	02L1SEE2	4"	CLAY	63'
S24	02L1SBB2	6"	CLAY	127'
S25	02L1SCC1	4"	CLAY	47'
S26	02L1SDD1	4"	CLAY	42'
S27	02L1SCC2	4"	CLAY	78'
S28	02L1SBB3	4"	CLAY	118'
S29	02L1SBB4	4"	CLAY	138'
S30	02L1SA8	8"	CLAY	45'
S31	02L1SGG1	4"	CLAY	15'
S32	02L1SFF1	4"	CLAY	26'

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88

ALL ELEVATIONS ARE IN NAVD 88

CAS

PROJECT NUMBER
08-22-025
06 OF 14

LEGEND:

-1.7 —— INVERT ELEVATION NAVD88

M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH

01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2

01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2

02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

SEE SHEET C-07 FOR CONTINUATION

UPDATED WASTEWATER MASTER PLAN ATLAS

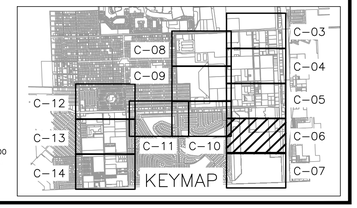
TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-06 FOR CONTINUATION


SW 32ND AVE.
W LAKE DR.
SW 32ND BLVD.
W LAKE SHORE DR.
LAKE SHORE DR.
MARINE DR.
I-95 EXPRESS
NE 215TH ST.
TOWN BORDER
LS-2
LS-3
LS-5
LS3
SEE TABLE FOR INFO
569 LF 4" ACP
02L2F1
1169 LF 4" ACP
02L5F1
574 LF 4" ACP
02L4F2
693' LF 4" ACP
02L5F2
181 LF 4" ACP
02L5F3
17 LF 4" DIP
02L5J2
43 LF 6" PVC
02L5SD2
315 LF 6" CLAY
02L5SD4
341 LF 6" CLAY
02L5SD3
282 LF 6" CLAY
02L5S7
280 LF 6" CLAY
02L5S6
360 LF 8" PVC
02L5S1
308 LF 6" CLAY
02L5S4
28 LF 12" N/A
02L5SA2
30 LF 8" CLAY
02L5SA3
287 LF 6" CLAY
02L5S8
250 LF 6" CLAY
02L5SC1
273 LF 6" CLAY
02L5SC2
247 LF 6" CLAY
02L5SB2
459 LF 8" CLAY
02L5SF4
394 LF 8" CLAY
02L5SG4
419 LF 8" CLAY
02L3SG2
399 LF 8" CLAY
02L3SG1
437 LF 8" CLAY
02L3SF2
380 LF 8" CLAY
02L3SF1
322 LF 6" CLAY
02L2SD5
252 LF 6" CLAY
02L3S4
238 LF 6" CLAY
02L3S3
241 LF 6" CLAY
02L3S2
255 LF 6" CLAY
02L3S1
318 LF 8" CLAY
02L3SH1
235 LF 8" CLAY
02L3SH2
150 LF 4" CLAY
02L3SH5
144 LF 4" CLAY
02L3SH1
115 LF 6" CLAY
02L3SH3
81 LF 4" CLAY
02L3SH4
103 LF 4" CLAY
02L3SK4
125 LF 6" CLAY
02L3SL3
83 LF 6" CLAY
02L3SL2
114 LF 6" CLAY
02L3SL1
115 LF 8" CLAY
02L3SA4
18 LF 8" UNK
02L3SA1
1248 LF 4" CIP
02L3F2
88 LF 8" CLAY
02L3SA5
115 LF 8" CLAY
02L3SD4
2688 LF 6" CIP
02L3F1
02L3P230
02L3J1
40 LF 6" CLAY
02L2SC1
16 LF 6" CLAY
02L2SA1
221 LF 6" CLAY
02L2SC4
422 LF 6" CLAY
02L2SC3
33 LF 6" CLAY
02L2SC2
318 LF 6" CLAY
02L2SE1
421 LF 6" CLAY
02L2SE2
126 LF 6" CLAY
02L2SE3
55 LF 6" CLAY
02L2SD1
415 LF 6" CLAY
02L2SE4
348 LF 6" CLAY
02L2SD4
256 LF 6" CLAY
02L2SD3
68 LF 6" CLAY
02L2SD2
39 LF 4" CLAY
02L2SE5
135 LF 4" CLAY
02L2SE6
25 LF 4" CLAY
02L2SH1
147 LF 4" CLAY
02L2SH2
569 LF 4" ACP
02L2F2
293 LF 8" CLAY
02L2SB1
262 LF 4" CLAY
02L2SA1
398 LF 6" PVC
02L7SA6
170 LF 8" CLAY
02L2SA2
175 LF 8" CLAY
02L2SA1
308 LF 8" CLAY
02L2SB2
795 LF 6" CLAY
02L2SB1
176 LF 4" CLAY
02L2SB2
120 LF 4" CLAY
02L2SB3
305 LF 6" PVC
02L7SA6
385 LF 8" CLAY
02L2SA4
240 LF 6" PVC
02L7SA7
125 LF 8" CLAY
02L2SA5
315 LF 8" CLAY
02L2SA1
297 LF 8" CLAY
02L2SA6
316 LF 8" CLAY
02L2SA2
300 LF 8" CLAY
02L2SA7
314 LF 8" CLAY
02L2SA8
300 LF 8" CLAY
02L2SB4
318 LF 8" CLAY
02L2SB5
99 LF 4" CLAY
02L3SA6
167 LF 6" CLAY
02L3SA5
149 LF 6" CLAY
02L3SA7
104 LF 6" CLAY
02L3SB3
62 LF 6" CLAY
02L3SB4
35 LF 4" CLAY
02L3SB5
35 LF 4" CLAY
02L3SC1
100 LF 6" CLAY
02L3SB1
214 LF 6" PVC
02L3SB2
213 LF 6" CLAY
02L3SB1
259.6 LF 6" CLAY
02L3SC2
285 LF 8" CLAY
02L3SA4
281 LF 8" CLAY
02L3SD2
298 LF 8" CLAY
02L3SD3
475 LF 8" CLAY
02L3SA3
487 LF 8" CLAY
02L3SD1
M1
M2
M3
M4
M5
M6
M7
M8
M2J1
M2N1
M2J2
M2K1
M2J3
M2L1
M2M1
M2L2
M5J1
M5J2
M5H5
M5H4
M5H3
M5H2
M5K1
M5M1
M5N1
M5L4
M5L3
M5L2
M5L1
M5H1
M3J1
M3H5
M3H4
M3H3
M3H2
M3K1
M3M1
M3N1
M3L4
M3L3
M3L2
M3L1
M3H1
M2D5
M2D4
M2D3
M2D2
M2D1
M2C1
M2C2
M2C3
M2C4
M2C5
M2C6
M2B5
M2B4
M2B3
M2B2
M2B1
M2A1
M2A2
M2A3
M2A4
M2A5
M2A6
M2A7
M2F1
M2F2
M2F3
M2E1
M2E2
M2H1
M2H2
M2H3
M2H4
M2H5
M2H6
M2H7
M2H8
M2H9
M2H10
M2H11
M2H12
M2H13
M2H14
M2H15
M2H16
M2H17
M2H18
M2H19
M2H20
M2H21
M2H22
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M2H27
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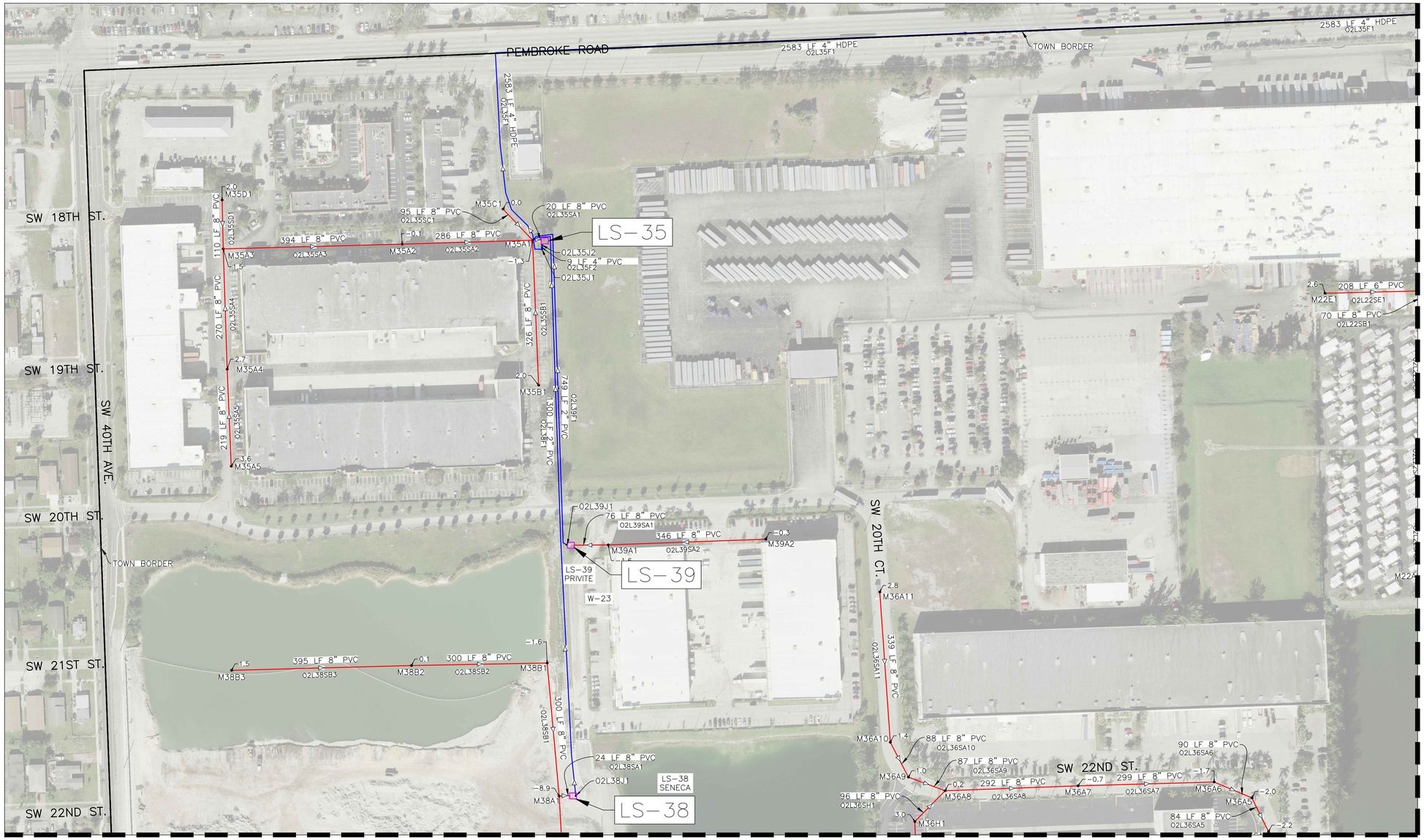
M2H39
M2H40



SEE SHEET C-09 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

LEGEND:

−1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1–LS14–SEWER BRANCH A–PIPE 2
01L14F2	FORCE MAIN: OUTFALL1–LS14–FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1–LS15–JUNCTION1

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP: C-03, C-04, C-05, C-06, C-07, C-08, C-09, C-10, C-11, C-12, C-13, C-14

PROJECT NUMBER
08-22-025
08 OF 14

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

SEE SHEET C-08 FOR CONTINUATION



SEE SHEET C-04 FOR CONTINUATION

SEE SHEET C-05 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
09 OF 14

LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

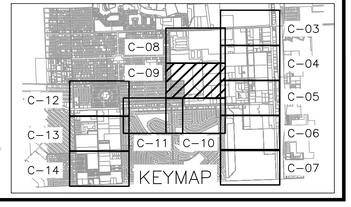
UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

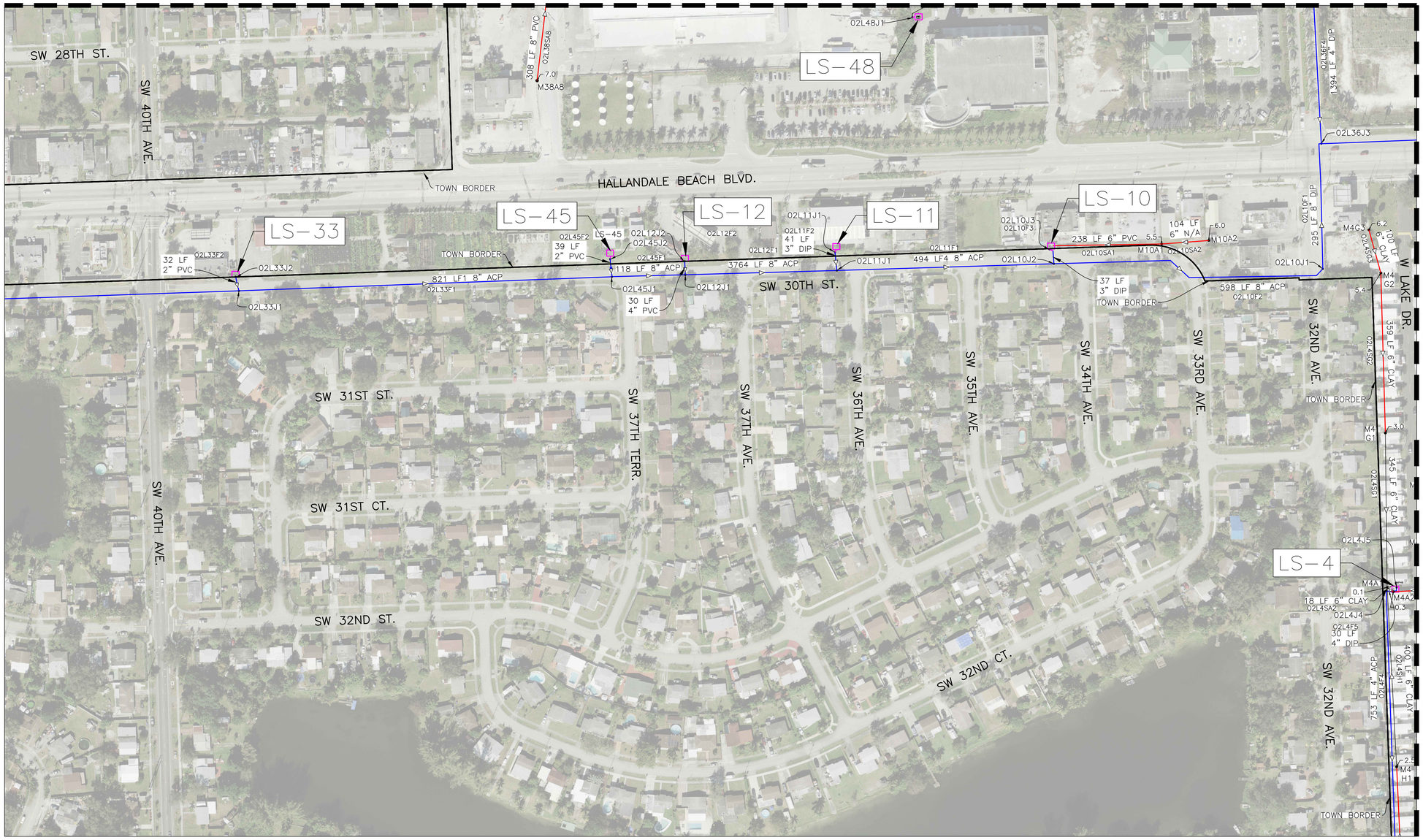
LEGEND:
- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-09 FOR CONTINUATION



BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
10 OF 14

LEGEND:

-1.7	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

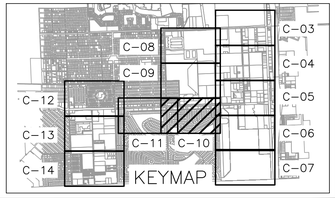
TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

N

0 50 100 200
HORIZONTAL GRAPHIC SCALE



SEE SHEET C-09 FOR CONTINUATION

SEE SHEET C-12 FOR CONTINUATION

SEE SHEET C-13 FOR CONTINUATION

SEE SHEET C-10 FOR CONTINUATION

SW 28TH ST.

SW 46TH AVE.

SW 44TH AVE.

SW 42ND AVE.

SW 40TH AVE.

TOWN BORDER

HALLANDALE BEACH BLVD.

LS-13

LS-15

LS-33

115 LF 8" PVC
02L13SA1

4.5

311 LF 8" N/A M13A1

3.2

M13A2

02L13SA2

02L13J2

02L13F2

27 LF
3" PVC

02L13J1

1330 LF 8" ACP
02L44F1

584 LF 8" ACP
02L13F1

02L15J2

02L15F2

27 LF
3" PVC

02L15J1

267 LF 8" PVC
02L15SA1

4.5

M15A1

1181 LF 8" ACP
02L15F1

SW 30TH ST.

32 LF
2" PVC

02L33F2

02L33J2

02L33J1

SW 31ST ST.

SW 31ST DR.

SW 47TH AVE.

SW 31ST DR

SW 32ND DR.

SW 33RD DR.

SW 32ND ST.

SW 32ND CT.

SW 33RD ST.

SW 40TH AVE.

SW 31ST CT.

SW 32ND ST.

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
11 OF 14

LEGEND:

-1.7-	INVERT ELEVATION NAVD88
M14M4	MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2	GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2	FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1	PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

LEGEND:

- FORCE MAIN PIPE
- GRAVITY SEWER PIPE
- GRAVITY SEWER MANHOLE
- LIFT STATION WETWELL
- PRESSURE JUNCTION

0 50 100 200
HORIZONTAL GRAPHIC SCALE

KEYMAP

C-03 C-04 C-05 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-13 C-14

TOWN BORDER
SW 25TH CT.
SEPTIC TANK
SEPTIC TANK
SEPTIC TANK
SEPTIC TANK
SW 56TH AVE.
SW 55TH AVE.
SW 54TH AVE.
SW 53RD AVE.
SW 25TH ST.
SW 26TH ST.
SW 27TH ST.
SW 28TH ST.
SW 48TH AVE.
SW 50TH TERR.
SW 52ND AVE.
HALLANDALE BEACH BLVD.
M14M5
145 LF 6" CLAY
M14A13
01L14SA13
375 LF 8" CLAY
M14A12
01L14SA12
M14A11
308 LF 8" CLAY
01L14SBB1
M14BB1
246 LF 8" CLAY
01L14SBB2
M14BB2
191 LF 6" CLAY
01L14SBB3
M14BB3
M14S6
286 LF 8" CLAY
01L14SS6
M14S5
280 LF 8" CLAY
01L14SS5
M14S4
118 LF 6" CLAY
01L14SW1
M14W1
138 LF 8" CLAY
01L14SA10
M14A10
190 LF 8" CLAY
M14AA2
01L14SAA2
248 LF 8" CLAY
M14AA1
01L14SAA2
321 LF 8" CLAY
01L14SZ1
M14Z1
324 LF 8" CLAY
01L14SZ2
M14Z2
345 LF 8" CLAY
01L14SM5
205 LF 8" CLAY
01L14SY10
M14M4
319 LF 8" CLAY
01L14SM4
115 LF 6" CLAY
M14M3
01L14SQ1
M14Q1
M14A9
202 LF 8" CLAY
01L14SY1
M14Y1
M14X2
203 LF 8" CLAY
01L14SY2
209 LF 8" CLAY
01L14SS4
130 LF 6" CLAY
01L14SR1
M14R1
249 LF 8" CLAY
01L14SG
209 LF 8" CLAY
01L14SK7
199 LF 8" CLAY
M14P1
01L14SP1
M14M2
M14A8
M14X1
244 LF 8" CLAY
M14S3
01L14SV1
M14V1
216 LF 8" CLAY
01L14SW2
247 LF 8" CLAY
01L14SK8
246 LF 8" CLAY
01L14SK1
211 LF 8" CLAY
01L14SS3
M14T2
76 LF 6" CLAY
01L14ST2
M14Q1
135 LF 6" CLAY
01L14SO1
327 LF 8" CLAY
01L14SN1
M14N1
294 LF 8" CLAY
M14M1
01L14SM1
248 LF 8" CLAY
01L14SS1
M14A7
M14S1
288 LF 8" CLAY
01L14SS2
M14S2
276 LF 8" CLAY
01L14ST1
M14T1
85 LF 6" CLAY
01L14SU1
79 LF 6" CLAY
01L14SN2
131 LF 8" CLAY
01L14SA7
M14U1
M14N2
M14J4
64 LF 8" CLAY
01L14SA6
M14A6
234 LF 8" PVC
M14K2
01L14SK2
261 LF 8" PVC
M14K1
01L14SK1
327 LF 8" PVC
M14A5
01L14SL1
355 LF 8" PVC
M14L1
01L14SL2
M14L2
227 LF 8" PVC
01L14SI3
M14I3
58 LF 8" PVC
01L14SA4
172 LF 8" CLAY
01L14SA5
245 LF 8" PVC
01L14SJ4
LS-42
01L42J1
68 LF 8" PVC
01L14SA3
TOWN BORDER
310 LF 8" PVC
M14I2
01L14SI2
M14I1
01L42F1
306 LF 8" PVC
01L14SS1
M14A4
01L14SJ1
255 LF 8" PVC
M14J1
303 LF 8" PVC
01L14SJ2
M14J2
247 LF 8" PVC
01L14SJ3
M14J3
1075 LF 4" DIP 01L42F1
290 LF 8" CLAY
M14C1
01L14SC1
M14A2
M14A3
102 LF 8" CLAY
01L14SA2
93 LF 8" CLAY
01L14SC2
LS-42
296 LF 8" DIP
01L17F1
01L14F2
M14C2
M14A1
307 LF 10" CLAY
01L14SB1
M14B1
286 LF 8" CLAY
01L14SB2
M14B2
M14C3
23 LF 8" CLAY
01L14SC3
01L17J1
01L14J2
15 LF 8" DIP
01L14J3
3 LF 10"
01L14SA1
LS-14
01L40F2
01L43J1
LS43
533 LF 2" PVC
01L43J1
315 LF 8" CLAY
01L14SC4
M14C4
01L14F2
LS-44
01L44J2
124 LF 2" PVC
01L44F2

SEE SHEET C-11 FOR CONTINUATION

SEE SHEET C-13 FOR CONTINUATION

BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

LEGEND:
-1.7 INVERT ELEVATION NAVD88
M14M4 MH LABEL: LS 14; BRANCH "M"; 4TH BRANCH MH
01L14SA2 GRAVITY SEWER LABEL: OUTFALL 1-LS14-SEWER BRANCH A-PIPE 2
01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

LEGEND:
FORCE MAIN PIPE
GRAVITY SEWER PIPE
GRAVITY SEWER MANHOLE
LIFT STATION WETWELL
PRESSURE JUNCTION

HORIZONTAL GRAPHIC SCALE
0 50 100 200

KEYMAP
C-03 C-04 C-05 C-06 C-07 C-08 C-09 C-10 C-11 C-12 C-13 C-14

PROJECT NUMBER
08-22-025
12 OF 14

UPDATED WASTEWATER MASTER PLAN ATLAS

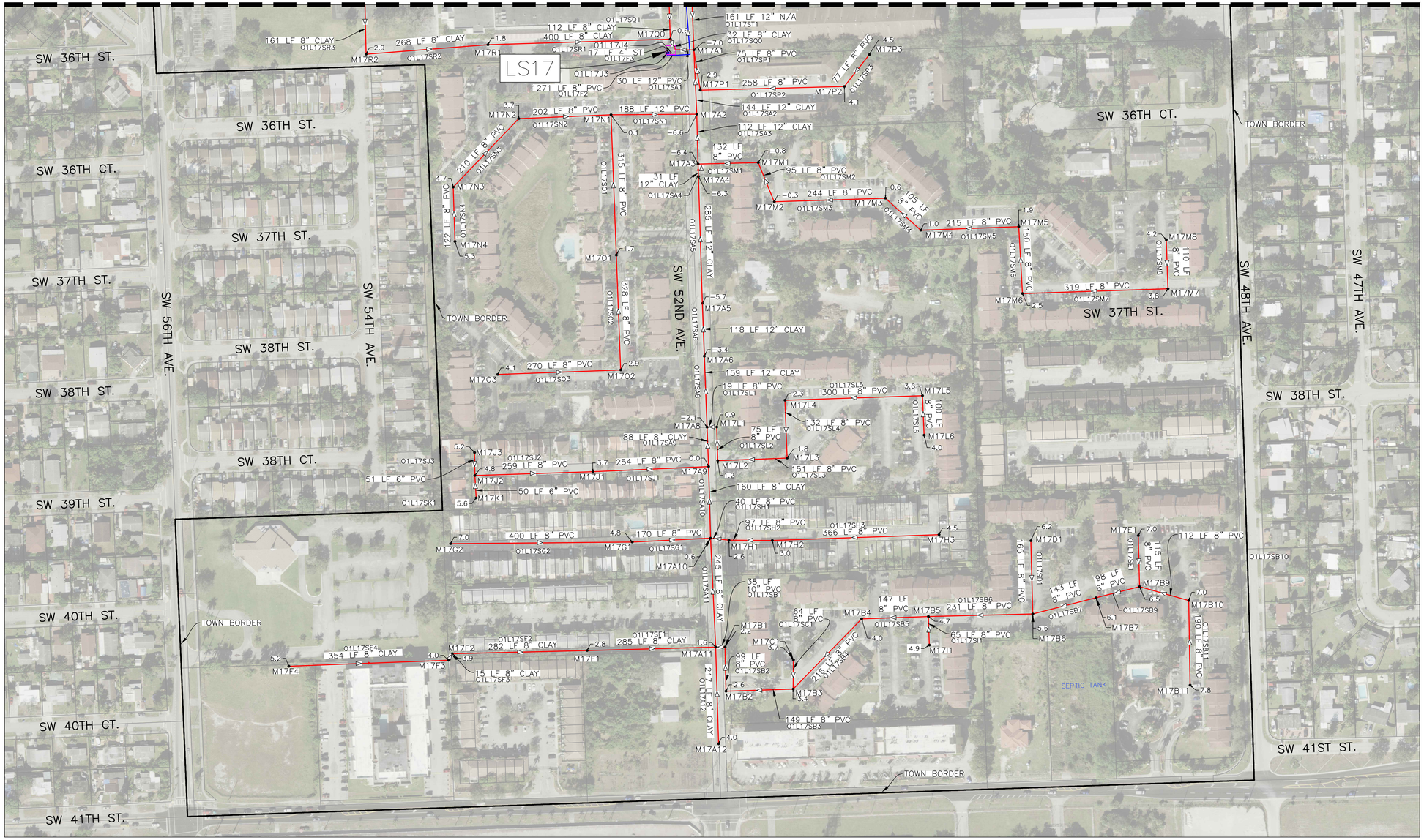
TOWN OF PEMBROKE PARK

SEE SHEET C-12 FOR CONTINUATION

SEE SHEET C-11 FOR CONTINUATION

WILLIAM RD.
MARION RD.
ALLEN RD.
EDMUND RD.
MIAMI GARDENS RD.
SW 56TH AVE.
SW 55TH AVE.
SW 52ND AVE.
SW 48TH AVE.
SW 47TH AVE.
SW 32ND ST.
SW 32TH ST.
SW 33TH ST.
SW 33RD ST.
SW 34TH ST.
SW 31ST DR.
SW 36TH ST.
TOWN BORDER
LS-37
LS40
INTERCONNECT/TIE IN/OUTFALL WITH BROWARD COUNTY (01)
1330 LF 36" ACP 01L44F1
1395 LF 10" PVC 01L14F2
8.6 LF 10" PVC 01L14F1
1155 LF 4" CIP 01L40F1
1100 LF 8" DIP 01L17F2
1271 LF 8" PVC 01L17F1
1155 LF 4" CIP 01L40F1
1330 LF 36" ACP 01L44F1
1271 LF 8" PVC 01L17F1
1100 LF 8" DIP 01L17F2

SEE SHEET C-13 FOR CONTINUATION



BROWARD COUNTY FUTURE CONDITIONS AVERAGE WET SEASON GROUND WATER ELEVATION MAP: 1FT NAVD88
ALL ELEVATIONS ARE IN NAVD 88

PROJECT NUMBER
08-22-025
14 OF 14

LEGEND:
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- 01L14F2 FORCE MAIN: OUTFALL1-LS14-FORCEMAIN 2
- 02L15J1 PRESSURE JUNCTION: OUTFALL1-LS15-JUNCTION1

UPDATED WASTEWATER MASTER PLAN ATLAS

TOWN OF PEMBROKE PARK

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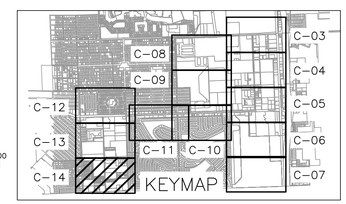
HORIZONTAL GRAPHIC SCALE



Agenda Item Report

Subject:	Department Monthly Updates
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	
Dept/Group:	
Recommendation for Counsel to consider:	
Background Information:	
Staff Recommendations:	
Financial Implications:	There is no financial impact.
Alternatives:	

ATTACHMENTS:

Department Updates

Information Technology Department

Monthly Report

December 31st, 2024

Administrative Tasks/Follow-Up

- Continuous review of day-to-day operations to ensure performance expectations match the mission and vision of the Department
- Managing day-to-day service issues. Help desk and support tickets
- Onboarding of new staff
- Public records request

Projects:

- Finalizing new building software with legal
- RMS for Police Department
- Software for the clerk's department
- Gathering quotes for new website
- Vulnerability Assessment audit of Town software
- GeoScada system with public works
- Finalizing procurement issues with new public records request software
- Collaborating with vendors for audio system upgrades
- Working on Internships
- Third floor Renovations – working with public works and vendors
- LPR Readers for Police
- Closing out the radio purchase

Future Tasks:

- Implementing new cyber security training software
- implementing backup fiber
- Camera system for GeoScada

CAPITAL HILLS CONSULTANTS

Governmental & Political Consulting

2436 N. Federal Hwy, #483
Lighthouse Point, FL 33064

E-mail: sigersonatlaw@aol.com

Phone: (954) 540-7252
Alt. Ph: (954) 336-3544

M E M O R A N D U M

DATE: Dec 31, 2024

TO: The Mayor, Vice Mayor and Commissioners

FROM: David K. Sigerson, Jr., Esq. for Capital Hills Consultants
And the Governmental Consulting Team

SUBJECT: December 2024 Legislative Report

This report covers the activities of the Town's Lobby & Consultant Team during the month of December, 2024. It provides my report, as well as, a summary of each team member's activities and their attached reports.

CHC – David Sigerson Activities:

Activities and Meetings. During the month of December 2024, I continued to review legislation that has been pre-filed for the 2025 Legislative Session, paying particular attention to bills affecting municipalities. I also check my list of 2024 bills affecting municipalities that didn't pass, but moved through the process as these bills are likely to be refiled.

December 2nd: Attended Town Commission workshop meeting and presented the proposed 2025 Town of Pembroke Park Legislative Program (TPP-PLP), which included the Legislative Budget Requests.

December 4th: Attended the MPO Technical Advisory Committee meeting and learned about a grant opportunity which I passed on the Dee Carper. Main action item: Technical Advisory Committee approval of the "Route to 2050 Metropolitan Transportation Plan (MTP)."

December 19th: Attended the Broward Legislation Public Hearing and Local Bill 1st Reading.

Also, I continued to review the results of the November legislative elections mainly to familiarize myself with the newly elected members, but also for the potential impact on the Town's legislative goals and objectives.

Dee Carper, Connie Vanassche and I continue to regularly discuss grant opportunities, awarded grant status and the progress and status of the various important studies: the Stormwater and Wastewater Master Plan updates and the Vulnerability Assessment Study. We also discussed the issues and elements to be included in the proposed 2025 Pembroke Park Legislative Program.

As always, I monitored the Town Commission meetings, if I could not attend in person.

Legislation on Annexation: – Annexation of Property

Although the annexation issue has generated little legislative interest during this last Regular Legislative Session, it is an issue that the Florida League of Cities voted to make a policy position at its December Legislative Conference.

Richard Coates, Bill Helmich and I discuss and monitor this issue as we review any legislation that is filed to ensure that any of these bills will not adversely affect the Town of Pembroke Park and monitor any legislation that could be amended with annexation language (for example almost any growth management bill). We continuously access legislative attitudes on the issue and then, as needed, develop a strategy with respect to potential future annexation legislation – recognizing that the issue continues to be one of great importance to the Town.

I shall remain in contact with the Mayor, Commissioners and the Manager to periodically provide updates, analysis and advice on this important issue should any new developments occur.

Pembroke Park Legislative Program.

As mentioned, the Legislative Program for 2024-25 was presented at the December 2nd Commission workshop meeting and follows the general framework that we have employed for a number of years, which consists of three elements: First, legislation that impacts municipalities in general; Second, legislation affecting the Town in particular (for example: mobile home legislation that would force local governments to pay mobile home relocation costs) or legislation that relates to our long-term strategy to protect and preserve the Town (e.g. annexation); and, Third, Legislative Budget Requests (LBRs). The LBRs are: The 52nd Avenue Road Improvement Project and Lift Stations 17 & 19 Infrastructure Improvement Projects.

2025 Legislation

The following is a list of pre-filed bills that affect municipal government or are of general interest:

HB 11: Municipal Water and Sewer Utility Rates

GENERAL BILL by Robinson, F.
Municipal Water and Sewer Utility Rates; Requires municipality to charge consumers receiving its utility services in another municipality same rates, fees, & charges as it charges consumers within its own municipal boundaries.
Effective Date: 7/1/2025

HB 13: Windstorm Coverage by Citizens Property Insurance Corporation

GENERAL BILL by Cassel ; (CO-INTRODUCERS) Hunschofsky
Windstorm Coverage by Citizens Property Insurance Corporation; Requires Citizens Property Insurance Corporation to make windstorm coverage available to homeowners for any residential structures and to commercial lines residential structures; provides requirements for windstorm coverage; authorizes homeowners to obtain windstorm coverage from certain insurance agents; provides underwriting & administering requirements for windstorm coverage portion of insurance; provides requirements for claims settlement payments; revises requirements for corporation's plan of operation; revises certain statements obtained by agents from applicants for coverage from corporation.
Effective Date: 7/1/2025

HB 35: Heat Illness Prevention

GENERAL BILL by Gottlieb
Heat Illness Prevention; Requires certain employers to implement outdoor heat exposure safety program that has been approved by specified departments; specifies requirements for safety program; provides responsibilities for

certain employers & employees; provides exceptions; requires specified annual training on heat illness & providing requirements for such training.
Effective Date: 10/1/2025

SB 66: Firefighter Benefits
GENERAL BILL by Garcia
Firefighter Benefits; Revising the definition of the term “cancer” to include acute myeloid leukemia for the purpose of expanding cancer treatment benefits, etc.
Effective Date: 7/1/2025

HB 75: Display of Flags by Governmental Entities
GENERAL BILL by Borrero
Display of Flags by Governmental Entities; Prohibits governmental entities from erecting or displaying certain flags; requires governmental entities to remain neutral in certain circumstances; requires that United States flag displayed by governmental entities be in certain position relative to other flags; authorizes current or retired member of United States Armed Forces or National Guard to use reasonable force to prevent desecration, destruction, or removal of United States flag or to replace such flag to position of prominence.
Effective Date: 7/1/2025

SB 86: Peer Support for First Responders
GENERAL BILL by Burgess
Peer Support for First Responders; Revising the definition of the term “first responder” to include specified support personnel for the provision of peer support, etc.
Effective Date: 7/1/2025

SB 100: Display of Flags by Governmental Entities
GENERAL BILL by Fine
Display of Flags by Governmental Entities; Defining the term “governmental entity”; prohibiting governmental entities from erecting or displaying certain flags; requiring governmental entities to remain neutral in certain circumstances; authorizing a current or retired member of the United States Armed Forces or the National Guard to use reasonable force to prevent the desecration, destruction, or removal of the United States flag or to replace such flag to a position of prominence, etc.
Effective Date: 7/1/2025

House Companion Bill: see HB 75 by Rep. Borrero, Identical

2025-2026 legislative leadership Teams Announced:

i
The incoming President and Speaker have announced their leadership teams:

Senate President Albritton named:
Senator Jason Brodeur, R-Sanford to be the Senate Pro Tempore
Senator Kathleen Passidomo, R-Naples - Ruleills Chair (she is the outgoing President of the Senate)
Senator Jim Boyd, R-Bradenton - Majority Leader
Senator Ed Hooper, R-Clearwater – Chair of Appropriations
Senator Joe Gruters, R-Sarasota – Chair of Fiscal Policy

Speaker Danny Perez named:
Rep. Wayman Duggan, R-Jacksonville – Speaker Pro Tempore and Chair of Ways & Means*
Rep. Sam Garrison, R-Fleming Island (Clay Cnty) – Rules & Ethics Committee Chair
Rep. Tyler Sirois, R-Merritt Island – Majority Leader & Security & Threat Assessment Committee Chair
Rep. Lawrence McClure, R-Dover (Hillsborough Cnty) – Budget Committee Chair
Rep. James Buchanan, R-Sarasota – Commerce Committee Chair
Rep. Chuck Brannan, R-Mcclenny – Judiciary Committee Chair
Rep. Jennifer Canady, R-Lakeland – Education & Employment Committee Chair
Rep. Josie Tomkow, R-Polk City – Health and Human Services Committee Chair
Rep. Will Robinson, R-Bradenton – State Affairs Committee Chair

Minority Party Leadership
Senator Jason Pizzo, D-Sunny Isles Beach – Senate Democratic Leader
Rep. Fentrice Driskell, D-Tampa – House Democratic Leader

Important Meeting Dates:

Broward Legislative Delegation:

November 12 2024	Delegation Organizational Meeting: The Delegation will meet on Tuesday Nov. 12th at 4pm to election a Chair and Vice Chair. The meeting will be held at Memorial Health Regional Hospital Conference Center – 3501 Johnson Street, Hollywood. The meeting free and open to the public, no registration is need and no public testimony will be taken.

State Legislature

November 19	State Legislative Organizational Meeting: The Organizational Session per the State Constitution will be held 14 days after the November 5th General Election on November 19th, 2024, (Art III, s. 3(a), Fla.Const.).
	2024-2025 Interim Committee Meetings:
Dec 2-6	House Interim Committee Meetings
Dec 9-12	Senate Interim Committee Meetings
Jan 13-17	Interim Committee Meetings (House and Senate)
Jan 20-24	Interim Committee Meetings (meetings begin on Tuesday)
Feb 3-7	Interim Committee Meetings

	Feb 10-14	Interim Committee Meetings
	Feb 17-21	Interim Committee Meetings
	March 4th, 2025	Opening Day of the Regular Legislative Session
	March 18-19, 2025	Broward Days Tallahassee – go to: www.browarddays.com for more information.
	March 25-26, 2025	FLC Legislative Action Days
	May 2, 2025	Last Day of the Regular Legislative Session
Fla League of Cities		
	Aug 15-17	The 2024 Annual Conference – was held at the Diplomat Beach Resort, Hollywood August 15 – 17.
	Oct 4, Nov 8, Dec 5	Legislative Policy Meetings: All to be held 10a – 2p Hilton Orlando, 6001 Destination Pkwy. The Dec 5th meeting will be the 2024 Legislative Conference.

Lobbyist team members reported:

Tidewater - Richard Coates:

The Tidewater November/December Report contains important legislative dates and an outline of the Town's proposed legislative program. Richard Coates reports that he confers with me and other members of the Pembroke Park Lobbyist Team on issues that might affect the Town during the upcoming 2025 legislative session in support of the development of the Town's proposed legislative program.

He continues to monitor and assess majority party leadership's attitude on the annexation issue. Mr. Coates stays in touch with the new legislative leadership: incoming Speaker and Senate President, Rep. Danny Perez and Sen. Ben Albritton, respectively. officials throughout the year.

He also monitors any legislative or executive branch activities at the Capital that could be helpful or that might be harmful to the Town – although during height of the campaign season there is very little legislative activity at the Capital.

Because Tidewater is based in Tallahassee (as is Helmich Consulting), that gives the Town permanent presence in the Capital city that is very important for gaining insight into the political atmosphere in the state, particularly among the state's Governor, Cabinet and legislative leadership.

The Tidewater written report is attached.

Helmich Consulting - Bill Helmich:

During the month of December Bill Helmich reports that he has conferred with me on the Town's LBRs and on the annexation issue – probability that it might come up this session as a result of the FLC adopting it as a Policy Statement.

He & I continued to discuss the various legislative election results around the state for potential impact on the Town's agenda with particular attention to the newly elected members.

He reports meeting with various key legislators during the House and Senate Interim Committee meetings in December.

He reports that he continues to maintain contact with high level Governor's staff members on our issues, especially the annexation issue and he monitors other Legislative and Executive branch activities at the Capital through his various staff contacts and maintains relationships with the House and Senate leadership teams on both sides of the aisle.

Mr. Helmich's report is attached.

CAS Government Services, LLC - Dale Milita/Connie Vanassche/Jim Spratt

Ms. Vanassche reports that during the month of December she collaborated with me and Ms Wood-Carper and other Team members regarding the Town's legislative issues, capital needs and grants both awarded and those for which the Town could potentially qualify.

She updated her reporting on her grant administration activities: the Vulnerability Assessment FDEP Grant and the GeoSCATA Telemetry FDEP Grant. Vulnerability Assessment Grant (VAG): she reports coordinating with the grant team and the FDEP project manager in reviewing the final report for presentation to the Commission and beginning preparation of the next quarterly report. Further, that the VAG is close to 100% complete. GeoSCATA Telemetry FDEP Grant: she reports coordinating with FDEP regarding sole source procurement, installation and details of the work plan. She is preparing the next quarterly report.

She reports working with myself and the other Team members on preparing the 2025 proposed Pembroke Park Legislative program and worked with Dee Carper and myself on developing proposed Legislative Budget Request (LBRs) projects which the Commission considered at its December 2nd workshop. In addition, she reports filing drafts of the Town's budget requests to House and Senate staff as well as monitoring the December interim committee meetings.

And finally, she reports monitoring the Pembroke Park Commission and Workshop meetings during the month of December, 2024 and was available to provide information to the staff or the Commission during the Commission and Workshop meetings.

Her report includes a list of important legislative dates as well as list of bills that will go into effect on January 1, 2025.

Ms. Vanassche's report was previously sent in to the Assistant Manager, but is attached for your convenience.

DC Strategies - Desinda Wood-Carper

Ms. Wood-Carper continues her work to update the Town's CIP list. She monitors work on the Stormwater and Wastewater Master Plans and work to complete and submit the final Vulnerability Assessment Study by Kimberly Horne. These completed master plans and vulnerability study are needed in order to be properly update the CIP.

Ms. Wood-Carper continues to work closely with Ms. Vanassche on the Town's grant applications and the Town's CIP list and collaborating with her specifically on the Vulnerability Study.

She also monitors the progress of numerous grant-funded projects to assure compliance with grant requirements.

And finally, as she always, Ms. Wood-Carper monitors all Town Commission meetings and workshops.

Her report has been sent in to the Assistant Manager separately.

TIDEWATER CONSULTING INCORPORATED

MEMORANDUM

DATE: November/December 2024

TO: The Mayor, Vice Mayor, and Commissioners

FROM: Richard E. Coates, President
Tidewater Consulting, Inc.

SUBJECT: Regular Monthly Report for November/December 2024

This report covers the Month of November/December 2024.

Tidewater Consulting, Inc. Activities:

We have continued to meet with and have discussions with Town team members, regarding the matters and needs that directly affect the Town. As always, we have engaged with varying members to continue talking about the needs of the Town of Pembroke Park on behalf of the Town, throughout the year. Richard Coates has had multiple calls/conversations with the lobbying team and with Mayor Ashira Mohammed with regards to the projects for the Town of Pembroke Park. We are busy preparing for Organization Session, committee meetings and the next legislative session.

2025 Legislative Regular Session Dates:

Remaining Legislative Dates-

Date	Event
January-February, 2025	Committee Weeks January 13-17 January 21-24 February 3-7 February 10-14 February 17-21
by February 2, 2025	At least 30 days prior to the scheduled annual regular session, the Governor shall furnish each senator and representative a copy of his recommended budget and revenues

February 14, 2025	Lobbyist Compensation Report Filing Deadline for October 1-December 31
March 4, 2025	Regular Session Begins
March 4, 2025	12:00 noon, deadline for filing bills for introduction
April 19, 2025	All bills are immediately certified
	Motion to reconsider made and considered the same day
April 22, 2025	50th Day rule (Senate) - last day for regularly scheduled committee meetings
May 2, 2025	Regular Session Ends
May 15, 2025	Lobbyist Compensation Report Filing Deadline for January 1-March 31

Legislation on Annexation: – Annexation of Property

Just as in previous years, we have been in touch with House and Senate members with regards to the annexation matter with respect to the Town of Pembroke Park. We will always advise of updates and progress if anything should transpire in the coming months. We are constantly monitoring this matter as we know it is of high priority to the Town of Pembroke Park, and what impacts and implications it could mean for the Town.

Pembroke Park Legislative Program:

We are consistently and constantly working with all team members regarding alternative strategies for achieving our legislative objectives and for obtaining legislative funding for future projects, including securing grant money. We are aware that the Town's Appropriation Project Request (APR) for funding has been modified to encompass matters that impact the Town residents, such as taxes, public services, permitting and development.

2024-2025 Pembroke Park Proposed Legislative Program:

I. SUBSTANTIVE LEGISLATIVE POLICY STATEMENTS

A. Development, Code Compliance and Redevelopment
B. Local Government Taxing Authority/Finance & Tax
C. Intergovernmental Relations, Mobility & Emergency Management
D. Municipal Operations
E. Utilities, Natural Resources & Public Works
F. Other Issues

II. APPROPRIATIONS:

SW 52nd roadway improvements project:
Funds Requested: $911,866.00 (construction cost estimate)
Town Match: $225,000.00
Total Project Cost: $1,136,866.00

Lift Stations 17&19:
Based on the 1/2023 lift stations proposals & construction cost estimates:
LS 17: Eng. During Construction: $164,290 + Constr. Observation: $106,230 = $270,290 + Constr. $1,520,000.00 = $1,790,290
LS 19: Eng. During Construction: $108,290 + Constr. Observation: $76,000. = $184,290 + Constr. $1,084,544 = $1,268,834

III. Selected Significant Pre-Filed Bills

Florida Senate Leadership Team for 2024-2026 Term

Senator Jason Brodeur – Senate President Pro Tempore
President Kathleen Passidomo – Chair, Senate Committee on Rules
Senator Ed Hooper – Chair, Senate Committee on Appropriations
Senator Joe Gruters – Chair, Senate Committee on Fiscal Policy
Senator Jim Boyd – Majority Leader

Florida House Leadership Team for 2024-2026 Term

Representative Chuck Brannan- Judiciary Committee Chair
Representative James Buchanan, Commerce Committee Chair
Representative Jennifer Canady, Education & Employment Committee Chair
Representative Wyman Duggan, Speaker pro tempore and Ways & Means Committee Chair
Representative Sam Garrison, Rules & Ethics Committee Chair
Representative Lawrence McClure, Budget Committee Chair
Representative Will Robinson, State Affairs Committee Chair
Representative Tyler Sirois, House Majority Leader and Security & Threat Assessment Committee Chair
Representative Josie Tomkow, Health & Human Services Committee Chair

Firm Representation/Background Note:

As previously mentioned, we are a stable office in Tallahassee and can monitor the activities of certain legislative movements throughout the year, and listen out for anything that might be beneficial or harmful to the Town. We continuously have public officials and members of the legislature that frequent the Tallahassee area even long after Session has concluded.

Tidewater has created a tradition of exceeding customer expectations. Our passion for providing an excellent customer experience is exemplified in every action of the process from proposal to client service delivery. The firm's members are uniquely qualified to represent clients through proven experience, unrivaled contacts in Florida's government and extensive ties to many areas throughout Florida. Tidewater has enjoyed an excellent relationship with the Town, and representing the needs of the community in both the Florida Legislative and Executive branch.

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
10401	12/2/2024	3030 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #142 Lone Pine Terr	Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-48. - Outdoor storage prohibited Sec 5-103(o). - Exterior maintenance of structures and premises	Notice of Violation	J. Gustin	Regular Mail
10402	12/2/2024	3140 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #3120 W HALLANDALE BEACH BLVD Lot # 528	Sec. 12-48. - Outdoor storage prohibited Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Violation	J. Gustin	Regular Mail
10403	12/2/2024	4420 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #4444 W HALLANDALE BEACH BLVD	Sec. 21-19 (o). - Prohibited signs. Sec 21-20(c)(3b). Permanent Signs. Sec. 21-19 (a). - Prohibited signs.	Notice of Violation	J. Ramirez	Regular Mail
10404	12/2/2024	4420 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #4492 W HALLANDALE BEACH BLVD	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties. Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-28. - Display.	Notice of Violation	J. Ramirez	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
10407	12/3/2024	2954 SW 30 AVE, PEMBROKE PARK, FL 33009	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 15-175. - Certificate of use requirements. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties	Notice of Violation	J. Gustin	Regular Mail
9501	12/3/2024	5401 SW 25 CT, PEMBROKE PARK, FL 33023	Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 12-46. - Failure of owner to comply with notice; assessment for correction by Town Sec. 12-41. - Accumulations deemed public nuisance Sec. 22-29. - Responsibility for maintenance.	Notice of Formal Hearing	J. Ramirez	Hand
9698	12/3/2024	1730 SW 30 AVE, PEMBROKE PARK, FL 33009	Sec. 21-19 (a). - Prohibited signs.	Affidavit of Non-Compliance	J. Gustin	Regular Mail
10276	12/3/2024	2954 SW 30 AVE, PEMBROKE PARK, FL 33009	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec 5-103(g). - Exterior maintenance of structures and premises Sec. 21-19. - Prohibited signs.	Affidavit of Non-Compliance	J. Gustin	Email

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
10410	12/4/2024	4520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #12	Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-17. - Business Tax Receipt Required. Sec. 15-24. - Tax payment required to engage in business.	Notice of Violation	J. Ramirez	Regular Mail
10398	12/5/2024	3924 PEMBROKE RD, PEMBROKE PARK, FL 33021	Sec. 22-27. - Use of certain grass species. Sec. 22-29. - Responsibility for maintenance.	Affidavit of Compliance	J. Ramirez	Hand
10411	12/9/2024	2300 S PARK RD, PEMBROKE	Sec. 21-19 (d). - Prohibited signs.	Notice of Violation	J. Gustin	Regular Mail
10414	12/10/2024	4520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #10	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties. Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-24. - Tax payment required to engage in business.	Notice of Violation	J. Ramirez	Regular Mail
9628	12/10/2024	2111 JOHN P LYONS LN, PEMBROKE PARK, FL 33021	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties Sec. 15-28. - Display. Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
8365	12/10/2024	2250 S PARK RD, PEMBROKE PARK, FL 33009	Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-103(k). - Exterior maintenance of structures and premises Sec 5-103(m). - Exterior maintenance of structures and premises Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 28-333. - Industrial zoned areas.	Notice of Formal Hearing	J. Ramirez	Regular Mail
8967	12/11/2024	3121 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #106	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Gustin	Email Regular Mail
5316	12/11/2024	3030 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #108 Lone Pine Drive	Sec 5-105. - Repairs and installations Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (a) Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (b)	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
10421	12/11/2024	3121 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 ##108	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-177. - Initial certificate of use. Sec. 15-28. - Display. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties	Notice of Violation	J. Gustin	Email Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
7672	12/11/2024	3121 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 ##110 WORLD STAR ENTERPRISES,INC	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-176. - Annual renewal and delinquent renewal penalties. Sec. 15-40 - Delinquent business tax receipt fees and penalties.	Affidavit of Compliance	J. Gustin	Email Regular Mail
10423	12/12/2024	3131 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009	Sec 5-103(h). - Exterior maintenance of structures and premises Sec. 11-34. - Responsibility of property owners. Sec. 12-41. - Accumulations deemed public nuisance Sec. 12-42. - Responsibility of property owners. Sec. 12-46. - Failure of owner to comply with notice; assessment for correction by Town	Notice of Violation	J. Gustin	Regular Mail
10424	12/12/2024	3127 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #3127 W HALLANDALE BEACH BLVD, #111A	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-177. - Initial certificate of use. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties	Notice of Violation	J. Gustin	Regular Mail
9637	12/12/2024	3127 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #3127 W HALLANDALE BEACH BLVD, #111A	Sec. 15-175. - Certificate of use requirements. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties Sec. 15-177. - Initial certificate of use. Sec. 15-17. - Business Tax Receipt Required.	Affidavit of Compliance	J. Gustin	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9066	12/12/2024	3030 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #329 Lone Pine Lane	Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-48. - Outdoor storage prohibited	Affidavit of Non-Compliance	J. Gustin	Regular Mail
10425	12/13/2024	2540 SW 30 AVE, PEMBROKE PARK, FL 33009 #2538-2540 SW 30 AVE	Sec. 12-41. - Accumulations deemed public nuisance Sec. 12-48. - Outdoor storage prohibited	Courtesy Notice	J. Gustin	Email
10431	12/16/2024	5590 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-48. - Outdoor storage prohibited	Notice of Violation	J. Ramirez	Regular Mail
10432	12/16/2024	3201 SW 22 ST, PEMBROKE PARK, FL 33023 #3215 SW 22 ST	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties. Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-40 (c) - Delinquent business tax receipt fees and penalties	Notice of Violation	J. Ramirez	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
10433	12/16/2024	3250 S 31 WAY, PEMBROKE PARK, FL 33009	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties. Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-40 (c) - Delinquent business tax receipt fees and penalties	Notice of Violation	J. Ramirez	Regular Mail
5812	12/16/2024	3250 S 31 WAY, PEMBROKE PARK, FL 33009 #7 sunny lane	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 28-272 - Number of occupants per mobile home or recreational vehicle	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
9116	12/16/2024	3868 SW 52 AVE, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
9116	12/16/2024	3868 SW 52 AVE, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9157	12/16/2024	2701 S PARK RD, PEMBROKE PARK, FL 33009 #135 Steven Street, Pembroke Park, FL 33009	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-76. (a) Nuisances: duty of property owners and tenants to prevent. Sec. 12-76. (b) Nuisances: duty of property owners and tenants to prevent. Sec. 12-76. (c) Nuisances: duty of property owners and tenants to prevent. Sec 5-103(b). - Exterior maintenance of structures and premises Sec. 5-104. - Determination of need for correction Sec 5-103(j). - Exterior maintenance of structures and premises	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
9157	12/16/2024	2701 S PARK RD, PEMBROKE PARK, FL 33009 #135 Steven Street, Pembroke Park, FL 33009	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-76. (a) Nuisances: duty of property owners and tenants to prevent. Sec. 12-76. (b) Nuisances: duty of property owners and tenants to prevent. Sec. 12-76. (c) Nuisances: duty of property owners and tenants to prevent. Sec 5-103(b). - Exterior maintenance of structures and premises Sec. 5-104. - Determination of need for correction Sec 5-103(j). - Exterior maintenance of structures and premises	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9184	12/16/2024	3615 SW 52 AVE, PEMBROKE PARK, FL 33023	Sec. 15-40 (a) - Delinquent business tax receipt fees and penalties Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties.	Affidavit of Compliance	J. Ramirez	Regular Mail
9211	12/17/2024	4250 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #2	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Compliance	J. Ramirez	Regular Mail
9156	12/17/2024	5500 SW 32 CT, PEMBROKE PARK, FL 33023 1-2 #A & B	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 22-27. - Use of certain grass species. Sec. 22-29. - Responsibility for maintenance. Sec 5-103(h). - Exterior maintenance of structures and premises Sec 5-103(l). - Exterior maintenance of structures and premises	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
9156	12/17/2024	5500 SW 32 CT, PEMBROKE PARK, FL 33023 1-2 #A & B	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 22-27. - Use of certain grass species. Sec. 22-29. - Responsibility for maintenance. Sec 5-103(h). - Exterior maintenance of structures and premises Sec 5-103(l). - Exterior maintenance of structures and premises	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9269	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3940 Pembroke Rd, Pembroke Park, FL 33009	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-22. - Application. Sec. 15-28. - Display. Sec 5-105. - Repairs and installations Sec. 21-19. - Prohibited signs. Sec 5-103(b). - Exterior maintenance of structures and premises	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
9319	12/17/2024	3301 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Compliance	J. Ramirez	Regular Mail
9380	12/17/2024	3520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Ramirez	Regular Mail
9380	12/17/2024	3520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Certified Mail
6326	12/17/2024	3250 S 31 WAY, PEMBROKE PARK, FL 33009 #13, 14, 15, & 16 sunny lane	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec 5-103(h). - Exterior maintenance of structures and premises	Affidavit of Non-Compliance	J. Ramirez	Hand

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9071	12/17/2024	4901 SW 27 AVE, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec. 28-346 (a) - Portable storage units Sec. 28-346 (b)(3) - Portable storage units Sec. 28-346 (f) - Portable storage units	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
6733	12/17/2024	3300 PEMBROKE RD, PEMBROKE PARK, FL 33021 #331	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Compliance	J. Gustin	Regular Mail
6799	12/17/2024	3300 PEMBROKE RD, PEMBROKE PARK, FL 33021 #Lot 150	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Compliance	J. Gustin	Regular Mail
8393	12/17/2024	2520 SW 30 AVE, PEMBROKE PARK, FL 33009	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-28. - Display. Sec. 11-16. - Location; placement for collection.	Affidavit of Compliance	J. Ramirez	Hand
10425	12/17/2024	2540 SW 30 AVE, PEMBROKE PARK, FL 33009 #2538-2540 SW 30 AVE	Sec. 12-41. - Accumulations deemed public nuisance Sec. 12-48. - Outdoor storage prohibited	Affidavit of Compliance	J. Gustin	Regular Mail
10411	12/17/2024	2300 S PARK RD, PEMBROKE PARK, FL 33009 #2300 -2490	Sec. 21-19 (d). - Prohibited signs.	Affidavit of Compliance	J. Gustin	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9939	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3948-B PEMBROKE RD	Sec. 21-21. (7) - Temporary signs Sec. 15-175. - Certificate of use requirements. Sec. 15-22. - Application. Sec. 15-28. - Display.	Affidavit of Compliance	J. Ramirez	Regular Mail
9963	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3932 PEMBROKE RD	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Ramirez	Affidavit of Service/Posted to Property
9963	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3932 PEMBROKE RD	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property
9989	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3930 - 3948 PEMBROKE RD	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property
9700	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3936 Pembroke Road	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-40 (c) - Delinquent business tax receipt fees and penalties Sec. 15-177. - Initial certificate of use. Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 15-28. - Display.	Affidavit of Non-Compliance	J. Ramirez	Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9700	12/17/2024	3930 PEMBROKE RD, PEMBROKE PARK, FL 33021 #3936 Pembroke Road	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-40 (c) - Delinquent business tax receipt fees and penalties Sec. 15-177. - Initial certificate of use. Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 15-28. - Display.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
9437	12/18/2024	4250 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #6	Sec. 15-22. - Application. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties Sec. 15-17. - Business Tax Receipt Required.	Affidavit of Compliance	J. Ramirez	Regular Mail
9694	12/18/2024	3120 SW 19 ST, PEMBROKE PARK, FL 33009 #3140 SW 19 ST, 662/562	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-177. - Initial certificate of use. Sec. 15-40 (c) - Delinquent business tax receipt fees and penalties	Affidavit of Compliance	J. Gustin	Email Regular Mail
9399	12/18/2024	4803 SW 41 ST, PEMBROKE PARK, FL 33009 #4809 SW 41 Street, Apt. 108	Sec. 12-76. (b) Nuisances: duty of property owners and tenants to prevent. Sec 5-103(b). - Exterior maintenance of structures and premises Sec. 5-17. - Permit application. Sec 5-105. - Repairs and installations	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9401	12/18/2024	3900 SW 52 AVE, PEMBROKE PARK, FL 33023 203	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
9401	12/18/2024	3900 SW 52 AVE, PEMBROKE PARK, FL 33023 203	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property
9406	12/18/2024	4520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #13	Sec. 21-19. - Prohibited signs. Sec. 15-17. - Business Tax Receipt Required. Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties.	Affidavit of Compliance	J. Ramirez	Regular Mail
9416	12/18/2024	1960 SW 30 AVE, PEMBROKE PARK, FL 33009 #1960 SW 30 AVE, Unit B	Sec. 15-17. - Business Tax Receipt Required. Sec. 15-40 (b) - Delinquent business tax receipt fees and penalties Sec. 15-176 (a). - Annual renewal and delinquent renewal penalties.	Affidavit of Compliance	J. Ramirez	Regular Mail
9433	12/18/2024	3900 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property
9436	12/19/2024	4910 SW 28 CT, PEMBROKE PARK, FL 33023 4-13	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
9436	12/19/2024	4910 SW 28 CT, PEMBROKE PARK, FL 33023 4-13	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property
6622	12/19/2024	2701 S PARK RD, PEMBROKE PARK, FL 33009 #131 Janis Blvd	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(k). - Exterior maintenance of structures and premises	Notice of Formal Hearing	J. Ramirez	Certified Mail
9534	12/19/2024	4250 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #3	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application.	Affidavit of Compliance	J. Ramirez	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9768	12/20/2024	3140 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 # LOT 434	Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-105. - Repairs and installations Sec. 12-48. - Outdoor storage prohibited Sec. 5-17. - Permit application.	Notice of Formal Hearing	J. Gustin	Affidavit of Service/Posted to Property Certified Mail Email
10493	12/20/2024	3196 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009	Sec. 4-14 (a). - Duty of owner, custodian or person in control of animal: feces removal. Sec. 4-15. - Nuisances defined; actions constituting a nuisance. Sec. 4-17. - Feeding of wildlife prohibited.	Notice of Violation	J. Gustin	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
6009	12/20/2024	2329 JOHN P LYONS LN, PEMBROKE PARK, FL 33009	Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-103(f). - Exterior maintenance of structures and premises Sec 5-103(h). - Exterior maintenance of structures and premises Sec. 13-1. - Definitions Sec. 13-2. - Storage of abandoned property in the open prohibited Sec. 28-304 - Surface of parking area Sec. 28-307 (a) - Marking of spaces Sec. 12-48. - Outdoor storage prohibited Sec. 12-41. - Accumulations deemed public nuisance Sec 5-207. - Graffiti Enforcement Sec. 5-2(a). - Nonresidential commercial buildings, owner's responsibilities Sec. 5-2(b). - Nonresidential commercial buildings, owner's responsibilities Sec 5-103(k). - Exterior maintenance of structures and premises	Affidavit of Non-Compliance	J. Ramirez	Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
6009	12/20/2024	2329 JOHN P LYONS LN, PEMBROKE PARK, FL 33009	Sec 5-103 (a). - Exterior maintenance of structures and premises Sec 5-103(c). - Exterior maintenance of structures and premises Sec 5-103(f). - Exterior maintenance of structures and premises Sec 5-103(h). - Exterior maintenance of structures and premises Sec. 13-1. - Definitions Sec. 13-2. - Storage of abandoned property in the open prohibited Sec. 28-304 - Surface of parking area Sec. 28-307 (a) - Marking of spaces Sec. 12-48. - Outdoor storage prohibited Sec. 12-41. - Accumulations deemed public nuisance Sec 5-207. - Graffiti Enforcement Sec. 5-2(a). - Nonresidential commercial buildings, owner's responsibilities Sec. 5-2(b). - Nonresidential commercial buildings, owner's responsibilities Sec 5-103(k). - Exterior maintenance of structures and premises	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
5329	12/20/2024	3100 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #Lot 21	Sec 5-105. - Repairs and installations Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (a) Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (b)	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
5329	12/20/2024	3100 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #Lot 21	Sec 5-105. - Repairs and installations Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (a) Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (b)	Notice of Formal Hearing	J. Ramirez	Certified Mail
5370	12/20/2024	3924 SW 52 AVE, PEMBROKE PARK, FL 33023 C4	Sec 5-105. - Repairs and installations Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (a) Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (b)	Affidavit of Non-Compliance	J. Ramirez	Certified Mail
5370	12/20/2024	3924 SW 52 AVE, PEMBROKE PARK, FL 33023 C4	Sec 5-105. - Repairs and installations Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (a) Sec. 5-2. - Nonresidential commercial buildings, owner's responsibilities (b)	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
8721	12/20/2024	3520 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec. 22-28. - To be free from shrubs, hedges, rock substances, etc. Sec. 22-29. - Responsibility for maintenance. Sec. 11-16. - Location; placement for collection. Sec. 11-42(a) - Disposal of solid waste restricted Sec. 15-17. - Business Tax Receipt Required. Sec. 15-175. - Certificate of use requirements. Sec. 15-40 - Delinquent business tax receipt fees and penalties.	Notice of Formal Hearing	J. Ramirez	Affidavit of Service/Posted to Property Certified Mail
8812	12/20/2024	3030 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009 #139 Lone Pine Lane	Sec 5-105. - Repairs and installations Sec. 5-17. - Permit application. Sec. 12-48. - Outdoor storage prohibited	Notice of Formal Hearing	J. Gustin	Affidavit of Service/Posted to Property Certified Mail Email
10109	12/30/2024	4901 SW 27 AVE, PEMBROKE PARK, FL 33023	Sec. 11-42 (b)(1) - Disposal of solid waste restricted. Sec. 11-42(a) - Disposal of solid waste restricted	Affidavit of Compliance	J. Ramirez	Regular Mail
10397	12/30/2024	2831 SW 56 AVE, PEMBROKE PARK, FL 33023 #2831 SW 56 AVE	Sec. 22-27. - Use of certain grass species. Sec. 22-29. - Responsibility for maintenance.	Affidavit of Compliance	J. Ramirez	Regular Mail
10351	12/31/2024	5551 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec. 22-27. - Use of certain grass species. Sec. 22-28. - To be free from shrubs, hedges, rock substances, etc. Sec. 22-29. - Responsibility for maintenance. Sec. 25-16(2)(g) - Restrictions	Affidavit of Compliance	J. Ramirez	Regular Mail

Code Compliance Department Report

From 12/1/2024 to 12/31/2024

Town of Pembroke Park
3150 SW 52 Avenue
Pembroke Park, Florida 33023

Case #	Date Issued	Site Address	Violation Sections	Document Type	Officer Assigned	Delivery
9438	12/31/2024	4400 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #5	Sec. 22-85(a). - Obstructions of public rights-of-way. Sec. 13-6. - Circumstances for immediate removal by law enforcement officers.	Affidavit of Compliance	J. Ramirez	Regular Mail
10495	12/31/2024	3240 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33009	Sec. 22-29. - Responsibility for maintenance. Sec 5-103(l). - Exterior maintenance of structures and premises	Notice of Violation	J. Ramirez	Regular Mail
10496	12/31/2024	3300 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec 5-103(l). - Exterior maintenance of structures and premises Sec. 22-29. - Responsibility for maintenance.	Notice of Violation	J. Ramirez	Regular Mail
10497	12/31/2024	3500 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023	Sec. 22-29. - Responsibility for maintenance. Sec. 27-33. - Maintenance Sec 5-103(l). - Exterior maintenance of structures and premises	Notice of Violation	J. Ramirez	Hand
9214	12/31/2024	4400 W HALLANDALE BEACH BLVD, PEMBROKE PARK, FL 33023 #5	Sec. 21-20(c)(2). - Permanent signs. Sec. 21-20(c)(3). - Permanent signs. Sec. 21-21. (7) - Temporary signs	Affidavit of Compliance	J. Ramirez	Regular Mail

Summary	
Affidavit of Compliance	22
Affidavit of Non-Compliance	16
Courtesy Notice	1
Notice of Formal Hearing	25
Notice of Violation	18
Total	**82**

Public Services Department

Monthly Report

November 27th - December 31st, 2024

Administrative Tasks/Follow-Up

- Continuous review of day-to-day operations to ensure performance expectations match the mission and vision of the Department

Field Tasks and Crew Updates:

- Perform daily station inspections
- Install parking lot barriers at Preserve Park – 95% Complete, pending application of stain
- Reorganize storage sheds and preparing for renovation of Recreation Building at Preserve Park – Pending the purchase of new shed
- Send maintenance staff for training – begin early next year
- Refurbishment of bocce ball and horseshoe courts at the Bamboo Mobile Park – begin mid-January
- Finalizing program with Watkins Elementary at the Community Garden
- Assist with the Toy Drive

Projects:

- SW 25th Street Stormwater Improvement project – going out to bid by end of January
- SW 30th Street Sanitary Sewer Force Main Replacement project – opening of proposals on January 16th
- Wastewater Masterplan – is completed
- Stormwater Masterplan – is completed
- Vulnerability Assessment – is completed
- GeoSCADA – Approval from Florida Department of Environmental Protection to proceed with purchase and installation of systems
- SW 52nd Avenue Sinkhole – Engineer has provided recommendations, which are currently under review
- Town Hall AC Repairs – 2nd floor compressor and 3rd floor blower wheel assembly are installed; vendor will complete remaining work in January
- 3rd floor Renovations – pending quotes from Architect

Future Tasks:

- Removal of banners along Hallandale Beach Boulevard and Christmas lights at Town Hall – begin early January
- Review of the records room for scanning and disposal
- Repainting exterior of Town Hall
- Obtain quotes for renovation of bathrooms

CAS GOVERNMENTAL SERVICES, LLC
"Communication Advocacy Specialists"
Governmental – Legislative Services – Grants – Special Funding
P.O. Box 210623 • Royal Palm Beach, Florida 33421-0623
Office: 561.512.0089 • 850.228.1296 Fax: 1.866.929.8006

Town of Pembroke Park
Grant Administration and Legislative Report
December 2024 Activities

CAS Governmental Services, LLC (CASGS) is pleased to provide you with our Grant Administration and Legislative Services December activities report.

Grant Administration Services -- The following grant administration activities were performed:

- CASGS collaborated with Mrs. Wood-Carper regularly and other Team members advocating on behalf of the Town for grant opportunities, updates, research, and for compliance related issues.

➢ **Vulnerability Assessment: FDEP Grant Agreement No. 23LPN74** --

- Coordinated with grant team and participated in virtual meeting for review of final report and discussion of presentation to the Commission.
- CASGS coordinated with FDEP's project manager.
- CASGS began preparation of the next quarterly report for the period ending December.
- The Vulnerability Assessment grant is close to 100% completion and is in compliance.

➢ **GeoSCADA Telemetry Project: FDEP Grant Agreement No. LPA0613** --

- CASGS collaborated with staff and FDEP pertaining to the sole source procurement, installation and the details of the grant work plan.
- CASGS began preparation of the next quarterly report for the period ending December.

Legislative Services – The following legislative activities were performed:

- CASGS collaborated with David Sigerson and Mrs. Wood-Carper pertaining to the preparation of the Town's 2025-2026 legislative priorities.
- CASGS completed and provided drafts to Staff of the House Appropriation Project Request (APR) Funding and Attestation forms pertaining to the Town's two FY25-26 priority projects – Critical Assets Lift Stations 17 and 19 and SW 52nd Avenue Resiliency Roadway Improvements-Phase 2.
- CASGS completed and provided drafts to Staff of the FY25-26 Senate Local Funding Initiative Requests (LFIR) form with the Town's two priority funding projects.
- CASGS monitored the Town's Commission meetings.

- CASGS monitored the House and Senate for bill filings, activities and meetings pertaining to Committee Weeks and the 2025-2026 Legislative Session.
- The Senate published the calendar for the January 13th and January 21st Committee Weeks.
- CASGS will be present in Tallahassee for the upcoming Committee Weeks and 2025-2026 Legislative Session.
- Ten bills from the 2024 regular legislative session are slated to take effect Wednesday, January 1, 2025, the list is included with the report.

➢ **Committee Week Schedule:**

- Jan. 13-17, 2025
- Jan. 21-24, 2025
- Feb. 3-7, 2025
- Feb. 10-14, 2025
- Feb. 17-21, 2025

➢ **Legislative Calendar:**

- March 4, 2025 –the 2025-2026 Legislative Session begins
- March 18, 2025 – Broward Days
- March 24-26, 2025 – Florida League of Cities Legislative Action Days

CAS Governmental Services is honored to advocate on the Town's behalf. Thank you for the opportunity to represent the Town's needs and priorities.

Respectfully Submitted,

Connie Vanassche
James R. Spratt

Bills That Go into Effect January 1

Ordered by Bill Number

HB 0003	**Online Access to Materials Harmful to Minors** by Tramont
	Online Protections for Minors: Requiring social media platforms to prohibit certain minors from creating new accounts; requiring social media platforms to terminate certain accounts and provide additional options for termination of such accounts; providing conditions under which social media platforms are required to prohibit certain minors from entering into contracts to become account holders; authorizing the Department of Legal Affairs to bring actions under the Florida Deceptive and Unfair Trade Practices Act for knowing or reckless violations; authorizing the department to issue and enforce civil investigative demands under certain circumstances, etc. Effective Date: January 1, 2025
HB 0135	**Voter Registration Applications** by Gossett-Seidman
	Voter Registration Applications: providing an exception to a requirement that certain voter registration applicants must be registered without party affiliation; requiring the department to provide an applicant with a certain receipt; requiring the department to ensure that information technology processes and updates do not alter certain information without written consent; etc. Effective Date: January 1, 2025
SB 0184	**Impeding, Threatening, or Harassing First Responders** by Avila
	Impeding, Threatening, or Harassing First Responders; Defining the terms “first responder” and “harass”; prohibiting a person, after receiving a warning not to approach from a first responder who is engaged in the lawful performance of a legal duty, from violating such warning and approaching or remaining within a specified distance of the first responder with specified intent, etc. Effective Date: 1/1 /2025
HB 0267	**Building Regulations** by Esposito
	Building Regulations: Requiring the Florida Building Commission to modify provisions in the Florida Building Code relating to replacement windows, doors, or garage doors; providing requirements for such modifications; revising the timeframes in which local building officials must issue permits or provide certain written notice if certain private providers affix their professional seal to an affidavit; providing requirements for such written notices; deeming a permit application approved under certain circumstances; prohibiting local building code enforcement agency's from auditing the performance of private providers until the local building code enforcement agency creates a manual for standard operating audit procedures; providing requirements for such manual; requiring the manual to be publicly available online or printed; requiring certain audit results to be readily accessible; specifying when a permit application is deemed complete and approved; requiring the commission to review and consider certain provisions of law and technical amendments thereto and report its findings to the Legislature by a specified date, etc. Effective Date: January 1, 2025
SB 0362	**Medical Treatment Under the Workers’ Compensation Law** by Bradley
	Medical Treatment Under the Workers’ Compensation Law; Increasing limits on witness fees charged by certain witnesses; increasing maximum reimbursement allowances for physicians and surgical procedures, etc. Effective Date: 1/1/2025
SB 0556	**Protection of Specified Adults** by Rouson
	Protection of Specified Adults; Authorizing financial institutions, under certain circumstances, to delay a disbursement or transaction from an account of a specified adult; specifying that a delay on a disbursement or transaction expires on a certain date; authorizing the financial institution to extend the delay under certain circumstances; authorizing a court of competent jurisdiction to shorten or extend the delay, etc. Effective Date: 1/1/2025
SB 0892	**Dental Insurance Claims** by Harrell

	Dental Insurance Claims; Prohibiting a contract between a health insurer and a dentist from containing certain restrictions on payment methods; prohibiting a health insurer from charging a fee to transmit a payment to a dentist through Automated Clearing House (ACH) transfer unless the dentist has consented to such fee; prohibiting a health insurer from denying claims for procedures included in a prior authorization; prohibiting a contract between a prepaid limited health service organization and a dentist from containing certain restrictions on payment methods, etc. Effective Date: 1/1/2025
HB 1093	**Florida Uniform Fiduciary Income and Principal Act** by Caruso
	Florida Uniform Fiduciary Income and Principal Act: Revises provisions of Florida Uniform Principal & Income Act governing trusts, estates, life estates, & other term interests. Effective Date: January 1, 2025
HB 1491	**Pub. Rec./Investigations by the Department of Legal Affairs** by Tramont
	Pub. Rec./Investigations by the Department of Legal Affairs: Providing an exemption from public records requirements for information relating to investigations by the Department of Legal Affairs of certain social media violations; authorizing the department to disclose such information for specified purposes; providing for future legislative review and repeal of the exemption; providing an exemption from public records requirements for information relating to investigations by the department of certain age verification violations; providing for future legislative review and repeal of the exemption; providing a statement of public necessity, etc. Effective Date: January 1, 2025
SB 7054	**Private Activity Bonds** by Community Affairs
	Private Activity Bonds; Requiring the Division of Bond Finance of the State Board of Administration to annually determine the state volume limitation and publicize such information; repealing provisions relating to procedures for obtaining allocations, requirements, limitations on allocations, and issuance reports; establishing procedures for the issuance of private activity bonds; providing requirements for notices of intent to issue private activity bonds, etc. Effective Date: 1/1/2025

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WEEKLY SCHEDULE OF SENATE MEETING TIME ALLOCATIONS

January 13-17, 2025

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
January 13, 2025	**January 14, 2025**	**January 15, 2025**	**January 16, 2025**	**January 17, 2025**
	8:30-10:30am (Group I) Banking & Insurance 412K Commerce & Tourism 110S Edu. Postsecondary 301S Ethics & Elections 37S **11:00am-1:00pm (Group II)** Agriculture 301S Community Affairs 37S Education Pre-K - 12 412K Env. & Natural Res. 110S	**9:00am-12:00pm (Group V)** App./Health & Human Services 412K App./Pre-K - 12 Ed. 37S App./Transportation, Tourism, & Econ. Dev. 110S	**9:00-11:00am (Group VIII)** Rules 412K	
3:30-5:30pm (Group IX) Jt. Adm. Procedures Reed Hall Jt. Pub. Coun. Oversight 110S Jt. Leg. Auditing 412K	**1:30-3:30pm (Group III)** Children, Families, and Elder Affairs 301S Judiciary 412K Regulated Industries 37S Transportation 110S **4:00-6:00pm (Group IV)** Criminal Justice 37S Governmental Oversight & Accountability 110S Health Policy 412K Mil. & Vet. Affairs, Space, & Domestic Security 301S	**1:00-4:00pm (Group VI)** App./Agriculture, Env., & General Govt. 412K App./Crim. & Civil Jus. 37S App./Higher Education 401S Finance & Tax 301S	**1:00-3:00pm (Group VII)** Appropriations 110S Fiscal Policy 412K	

REMEMBER: *THE OFFICIAL CALENDAR IS PRINTED BY THE SECRETARY OF THE SENATE.*
THIS TENTATIVE SCHEDULE IS SUBJECT TO CHANGE.

WEEKLY SCHEDULE OF SENATE MEETING TIME ALLOCATIONS

January 20-24, 2025

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
January 20, 2025	**January 21, 2025**	**January 22, 2025**	**January 23, 2025**	**January 24, 2025**
STATE HOLIDAY		**8:30-10:30am (Group I)** Banking & Insurance 412K Commerce & Tourism 110S Edu. Postsecondary 301S Ethics & Elections 37S **11:00am-1:00pm (Group II)** Agriculture 301S Community Affairs 37S Education Pre-K - 12 412K Env. & Natural Res. 110S	**9:00-11:00am (Group V)** App./Health & Human Services 412K App./Pre-K - 12 Ed. 37S App./Transportation, Tourism, & Econ. Dev. 110S **11:30am-1:30pm (Group VI)** App./Agriculture, Env., & General Govt. 412K App./Crim. & Civil Jus. 37S App./Higher Education 110S Finance & Tax 301S	
	3:30-5:30pm (Group IX) Jt. Adm. Procedures Reed Hall Jt. Pub. Coun. Oversight 110S Jt. Leg. Auditing 412K	**1:30-3:30pm (Group III)** Children, Families, and Elder Affairs 301S Judiciary 412K Regulated Industries 37S Transportation 110S **4:00-6:00pm (Group IV)** Criminal Justice 37S Governmental Oversight & Accountability 110S Health Policy 412K Mil. & Vet. Affairs, Space, & Domestic Security 301S		

REMEMBER: THE OFFICIAL CALENDAR IS PRINTED BY THE SECRETARY OF THE SENATE.
THIS TENTATIVE SCHEDULE IS SUBJECT TO CHANGE.

MEMORANDUM

DATE: **December 27, 2024**

TO: **Town of Pembroke Park Commission**
Town of Pembroke Park Town Management

FROM: **Desinda "Dee" Wood-Carper, Grants/ Project Management Consultant,**
DC Strategies LLC

RE: **December 2024 Service Activity Report**

DC Strategies LLC continues to provide general administration, grant management and project coordination and appreciates the opportunity to provide this monthly service report.

December 2024

- DC Strategies LLC monitored the Town's regularly scheduled Commission meeting & monthly Workshop via online participation.
- Assisted the **Public Services Department** team with the coordination of granted infrastructure projects: S.W. 25th Street Stormwater Improvements (MPO grant) and John Lyons Stormwater Improvements (HMGP grant), as well as the S.W. 30th Avenue Force Main Replacement project (Town-funded). These projects are progressing as scheduled.
- DC Strategies LLC met weekly with **CAS Governmental Services LLC** (Connie Vanassche) to continue coordination of the crafting of the Pembroke Park Capital Improvement Plan (CIP) utilizing the **VULNERABILITY ASSESSMENT PLAN (Kimly-Horne)**, the **STORMWATER MASTER PLAN (Kimly-Horne)** & the **WASTEWATER MASTER PLAN (Craig A. Smith)**. All Plans have been received and reviewed by the Public Services Director and are submitted for workshop review/adoption by the Town Commission.
- DC Strategies LLC has provided a weekly update of projects in the current capital improvement plan to Assistant Town Manager Williamson, including status of grant compliance reporting.
- Attended meeting with **FDOT CLIP grant project manager** to proceed with the drafting of the grant agreement for the $3.1M grant awarded for bicycle lanes, sidewalks & drainage upgrades on S.W. 52nd Avenue and on South Park Road.
- Monitored the FL House of Representatives Committee meetings December 2nd- 5th, & FL Senate Committee meetings December 9th & 10th, 2024.

P.O. Box 470 Winter Park, FL 32792 (850) 363-3781
DCStrategiesLLC@yahoo.com

- Responsible for grant management/oversite of the Pembroke Park Police Department **FIBRIS grant** and collaboration with the Finance & Accounting Department on reimbursement submittals and assisting the PPPD with submittal of monthly performance reporting to the FDLE.

- **Conducted multiple Teams meetings between CAS Government Services LLC (Connie Vanassche) and Capitol Hill Group (David Sigerson)** to finalize the Town's 2025 Legislative Priorities. Critical upgrades to Lift Station 17 and 19, as well as, Resiliency Roadway Improvements on S.W. 52nd Avenue, have been slated as top priorities in the pursuit of funding from the Florida Legislature.

- **Conducted weekly Team meetings with the Public Services Department** team:

  Team Meeting 1 – To verify the MPO grant document status for the S.W. 25th Street project with County MPO Project Manager.

  Team Meeting 2 – To establish a process for LAP Certification by key staff required for the CSLIP grant and future FDOT grants.

  Team Meeting 3 – With the FL Division of Emergency Management Program Manager to discuss the status of 3 HMGP Irma grants (generator, SW 25th St. & JP Lyons).

- **Grant Research Requested:**

  MPO Safe Routes to Schools - a statewide effort to help children walk and bike to school safely. SRTS grants help fund roadway improvement projects near schools. (PWD)

  FL Alliance to End Human Trafficking - a grant application to support law enforcement agency efforts in fighting human trafficking. Request if grant can be used to purchase License Plate Readers. (PPPD)

  The County Incentive Grant Program (CIGP) provides funding to counties to improve transportation facilities located on the State Highway System or which relieves traffic congestion on the State Highway System. (PWD)

  Play & Park Community Impact Grant - provides funding to rejuvenate local parks, school yards or community centers with upgraded playground equipment.
  (Commissioner Kashem)

  US Department of Agriculture offers a Childhood Obesity Prevention matching grant to create playgrounds that help children stay healthy. (Commissioner Kashem)

- **Continued Monitoring of current grants listed, as follows:**

Public Services Department

HMGP	S.W. 25th Street Stormwater Project (Constr.) 1st Phase	$1,423,497.00
HMGP	John P. Lyons Lane Stormwater Improvements (Design)	$84,131.00
HMGP	Town Hall Hardening Wind Retrofit – Roof	$67,500.00
HMGP	Town Hall Hardening Wind Retrofit -Doors & Windows	$45,750.00
HMGP	Town Hall Hardening Wind Retrofit – Generator	$400,000.00
Surtax	S.W. 52nd Avenue Complete Streets (Design)	$264,000.00
Surtax	Park Rd. Bike Lanes & Sidewalk Improvements	$3,146,242.00
CSLIP/LAP	S.W. 52nd Avenue & South Park Road Drainage	$2,908,640.00

Pembroke Park Police Department

DOJ	Cops Hiring Grant	$368,643.00
DOJ	Accreditation Grant	$28,690.78
FDLE	FIBRS Implementation Assistance Grant 1 & 2	$288,432.41

Meeting & Event Calendar of Importance

- **2025 Legislative Meeting Schedule**
  January 13 – 17, 2025
  January 21* – 24, 2025 *Meetings begin on Tuesday due to Monday holiday
  February 3 – 7, 2025
  February 10 – 14, 2025
  February 17 – 21, 2025
  March 4, 2025 begins 60-day Regular Session

You may contact me directly at the phone number below should you require any additional information or would like to discuss specific grant or project initiatives.

Desinda L. Wood-Carper
DC Strategies LLC
(850) 363-3781

Building Department Monthly Report

	12/31/2024
Total Fees $	85,187
Muncipality Revenue $	84,937
Total Job Value $	1,702,384
Total Res Job Value $	9,800
Total Com Job Value $	1,692,584
New Jobs	36
Permits Completed	14
Permits Voided	0
Permits Expired	55

Building Department Monthly Report

Permits Issued	28
Inspections Completed	199
Reviews Completed	93
Reviews Assigned	105
Res Permits	8
Com Permits	68
Summary:	The Building Department has processed 36 permit applications for additions, renovations, tenant buildouts, and repairs commercial projects and mobile home repairs. 93 total plan reviews, Completed 199 inspections from all trades, and iss permits.

Major Projects: None at this time.

Staff Projects Clearing and Closing major projects

Date: 10/18/2024

for
sued 28

KEITH
Engineering Inspired Design.

December 31, 2024

MEMORANDUM

To: David Lynch, Town Manager- Town of Pembroke Park
Chandler Williamson, Deputy Town Manager
From: Mike Vonder Meulen, AICP - Consultant Town Planner

RE: Town Planner Update – Month of December, 2024

Please find a synopsis of Planning Activity for the Town of Pembroke Park.

Items of Interest:
Town Commission needs to appoint Planning and Zoning Board Members and Alternates
Attended TRILA meeting (School Board)
Attended Planning Directors meeting (Broward County)
Monitoring two projects abutting Pembroke Park (Hollywood P3s)
Introductory meeting with Home Depot

Monthly Permit Activity:
Building Permit Reviews - 9
Zoning Inspections – 16 (mostly Lennar Project)
Business Tax Receipts - 6
Zoning Letters - 1
Zoning Inquiries - 26
Special Event – 1
Liquor License - 1

Active Zoning Applications:

- Public Storage 23-SP-04, 23-PR-02 – TC 1/15
- Ekos Pembroke - Parking Reduction 24-PR-03 – Pending PZB Meeting
- Public Storage Plat 23-P-01 – Pending PZB Meeting
- Sign Code Rewrite – 24-Z-04 – Final Draft
- Live Local Code Amendments 24-Z-01 - Schedule for Lunch & Learn
- Self-storage Code Amendment – 24-Z-05 –Drafting Ordinance
- Pembroke Oakes 24-SP-01 – DRC comments due January, 2025

Awaiting Resubmittal

- Pembroke Park Villas 22-SP-02 – TC - Pending resolution of sewer
- Trinty LUPA 22-CP-02
- Palmetto Lakes Industrial Park 24-SP-05
- Ekos Pembroke - Site Plan 24-SP-04 – comments sent 12/13
- Park 95 24-SP-03 – Insufficiency letter sent

Project list and status can be found at Pembroke Park Planning Dept. log book.xlsx

INCIDENTNUMBER	INCIDENTTYPEDESCRIPTION	ALLDISPO	BEATNAM	INCIDENTI	FIRSTUNIT
FPK24120300002211	MENTAL ILLNESS	TFR	27B	12/03/202	12/03/202
FPK24120200002208	FIRE INVESTIGATION	CL	27A	12/02/202	12/02/202
FPK24122200002338	FIRE INVESTIGATION	COS, CL	27A	12/22/202	12/22/202
FPK24120100002201	HIGH RISE FIRE	NTR	27A	12/01/202	12/01/202
FPK24121900002322	HIGH HAZARD STRUCTURE FIRE	CL	27A	12/19/202	12/19/202
FPK24120100002200	ASSAULT	TFR	27B	12/01/202	12/01/202
FPK24121400002282	SUICIDE ATTEMPT	TFR	27A	12/14/202	12/14/202
FPK24121200002264	SHOOTING	TFR, TFR	27B	12/12/202	12/12/202
FPK24121400002276	FIGHT	CPD	27B	12/14/202	12/14/202
FPK24121000002244	DOMESTIC DISTURBANCE	REF	27B	12/10/202	12/10/202
FPK24121500002284	DOMESTIC DISTURBANCE	CFD	27B	12/15/202	12/15/202
FPK24121700002309	HIT & RUN ON HIGHWAY	TFR	27Y1	12/17/202	12/17/202
FPK24122200002335	HIT & RUN ON HIGHWAY	TFR	27Y1	12/22/202	12/22/202
FPK24122900002389	HIT AND RUN WITH INJURIES	NTR	27B	12/29/202	12/29/202
FPK24122900002397	HIT AND RUN WITH INJURIES	REF	27A	12/29/202	12/29/202
FPK24120100002203	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B	12/01/202	12/01/202
FPK24120400002217	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/04/202	12/04/202
FPK24120400002218	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/04/202	12/04/202
FPK24120400002219	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/04/202	12/04/202
FPK24120400002220	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/04/202	01/01/000
FPK24120400002226	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/04/202	12/04/202
FPK24120700002236	FIRE ALARM - COMMERCIAL STRUCTURE	CCL	27B	12/07/202	12/07/202
FPK24121600002299	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/16/202	12/16/202
FPK24121600002300	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/16/202	12/16/202
FPK24121900002320	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B	12/19/202	12/19/202
FPK24122200002336	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B	12/22/202	12/22/202
FPK24122200002337	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/22/202	12/22/202
FPK24122200002340	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A	12/22/202	12/22/202
FPK24122200002341	FIRE ALARM - COMMERCIAL STRUCTURE	DUP	27A	12/22/202	01/01/000
FPK24120700002238	FIRE ALARM	CL	27A	12/07/202	12/07/202
FPK24122100002328	FIRE ALARM	CL	27A	12/21/202	12/21/202
FPK24120800002241	FIRE ALARM - HIGH LIFE HAZARD	CL	27A	12/08/202	12/08/202
FPK24121800002317	FIRE ALARM - HIGH LIFE HAZARD	CCL	27A	12/18/202	12/18/202
FPK24122100002329	FIRE ALARM - HIGH LIFE HAZARD	CL	27A	12/21/202	12/21/202
FPK24120400002215	FIRE ALARM - MULTI-FAMILY	CL	27A	12/04/202	12/04/202
FPK24120400002216	FIRE ALARM - MULTI-FAMILY	CL	27A	12/04/202	12/04/202
FPK24120800002239	FIRE ALARM - MULTI-FAMILY	CL	27A	12/08/202	12/08/202
FPK24122700002380	ACCIDENT ROLLOVER OR EXTRICATION	CL, TFR	27A	12/27/202	12/27/202
FPK24123000002401	ACCIDENT ROLLOVER OR EXTRICATION	NTR	27Y1	12/30/202	12/30/202
FPK24120200002210	ACCIDENT HIGHWAY	TFR	27Y2	12/02/202	12/02/202
FPK24120400002221	ACCIDENT HIGHWAY	NTR	27Y2	12/04/202	12/04/202
FPK24120400002223	ACCIDENT HIGHWAY	DUP	27Y1	12/04/202	12/04/202
FPK24120400002222	ACCIDENT HIGHWAY	DUP	27Y1	12/04/202	12/04/202
FPK24120400002224	ACCIDENT HIGHWAY	CL	27Y1	12/04/202	12/04/202
FPK24120600002233	ACCIDENT HIGHWAY	CL	27Y1	12/06/202	12/06/202
FPK24120800002240	ACCIDENT HIGHWAY	TFR	27Y1	12/08/202	12/08/202

FPK24121100002252	ACCIDENT HIGHWAY	CL	27Y1	12/11/202	12/11/202
FPK24121200002258	ACCIDENT HIGHWAY	DUP	27Y2	12/12/202	01/01/000
FPK24121200002256	ACCIDENT HIGHWAY	CL	27Y2	12/12/202	12/12/202
FPK24121200002257	ACCIDENT HIGHWAY	DUP	27Y2	12/12/202	01/01/000
FPK24120500002232	ACCIDENT HIGHWAY	NTR	27Y1	12/05/202	12/05/202
FPK24121300002270	ACCIDENT HIGHWAY	NTR	27Y1	12/13/202	12/13/202
FPK24120400002225	ACCIDENT HIGHWAY	CL	27Y1	12/04/202	12/04/202
FPK24121600002295	ACCIDENT HIGHWAY	CL	27Y1	12/16/202	12/16/202
FPK24121600002297	ACCIDENT HIGHWAY	NTR	27Y2	12/16/202	12/16/202
FPK24121700002304	ACCIDENT HIGHWAY	DUP	27Y1	12/17/202	12/17/202
FPK24121700002310	ACCIDENT HIGHWAY	DUP	27Y1	12/17/202	01/01/000
FPK24121700002306	ACCIDENT HIGHWAY	TOA	27Y2	12/17/202	12/17/202
FPK24121900002319	ACCIDENT HIGHWAY	UNF	27Y1	12/19/202	12/19/202
FPK24122100002332	ACCIDENT HIGHWAY	NTR, NTR	27Y1	12/21/202	12/21/202
FPK24122400002360	ACCIDENT HIGHWAY	NTR, NTR	27Y1	12/24/202	12/24/202
FPK24121300002267	ACCIDENT HIGHWAY	NTR	27Y2	12/13/202	12/13/202
FPK24122900002391	ACCIDENT HIGHWAY	NTR, NTR,	27Y2	12/29/202	12/29/202
FPK24123000002400	ACCIDENT HIGHWAY	CL, TFR, TF	27Y2	12/30/202	12/30/202
FPK24120600002235	ACCIDENT WITH INJURIES	NTR	27B	12/06/202	12/06/202
FPK24121100002250	ACCIDENT WITH INJURIES	TFR	27A	12/11/202	12/11/202
FPK24121200002265	ACCIDENT WITH INJURIES	TFR	27B	12/12/202	12/12/202
FPK24121200002266	ACCIDENT WITH INJURIES	NTR	27B	12/12/202	12/12/202
FPK24121300002275	ACCIDENT WITH INJURIES	TFR	27B	12/13/202	12/13/202
FPK24121500002285	ACCIDENT WITH INJURIES	TFR	27B	12/15/202	12/15/202
FPK24121500002286	ACCIDENT WITH INJURIES	CCL, CCL	27B	12/15/202	12/15/202
FPK24121700002308	ACCIDENT WITH INJURIES	CL	27B	12/17/202	12/17/202
FPK24122200002339	ACCIDENT WITH INJURIES	CL	27B	12/22/202	12/22/202
FPK24122400002355	ACCIDENT WITH INJURIES	REF	27A	12/24/202	12/24/202
FPK24122400002357	ACCIDENT WITH INJURIES	CL, NTR	27A	12/24/202	12/24/202
FPK24122900002393	ACCIDENT WITH INJURIES	CL, CL	27B	12/29/202	12/29/202
FPK24122100002333	ACCIDENT WITH INJURIES	NTR	27B	12/21/202	12/21/202
FPK24122400002358	ACCIDENT WITH INJURIES	NTR, CL	27B	12/24/202	12/24/202
FPK24120300002212	ABDOMINAL PAIN	TFR	27A	12/03/202	12/03/202
FPK24121100002248	ABDOMINAL PAIN	DUP	27A	12/11/202	12/11/202
FPK24121300002271	ABDOMINAL PAIN	TFR	27A	12/13/202	12/13/202
FPK24122500002362	ABDOMINAL PAIN	TFR	27B	12/25/202	12/25/202
FPK24121100002255	ALLERGIC REACTION	CL	27A	12/11/202	12/11/202
FPK24122500002363	BACK PAIN	TFR	27A	12/25/202	12/25/202
FPK24120200002207	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/02/202	12/02/202
FPK24120600002234	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/06/202	12/06/202
FPK24121400002281	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/14/202	12/14/202
FPK24121500002288	CHEST PAINS NON-TRAUMATIC	NTR, REF	27A	12/15/202	12/15/202
FPK24121500002294	CHEST PAINS NON-TRAUMATIC	TFR	27B	12/15/202	12/15/202
FPK24121800002316	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/18/202	12/18/202
FPK24122000002326	CHEST PAINS NON-TRAUMATIC	TFR, TFR	27B	12/20/202	12/20/202
FPK24122000002324	CHEST PAINS NON-TRAUMATIC	REF	27A	12/20/202	12/20/202
FPK24122500002370	CHEST PAINS NON-TRAUMATIC	NTR	27B	12/25/202	12/25/202

FPK24122100002330	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/21/202	12/21/202
FPK24122500002367	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/25/202	12/25/202
FPK24122900002392	CHEST PAINS NON-TRAUMATIC	TFR	27A	12/29/202	12/29/202
FPK24121000002245	CARDIAC/RESPIRATORY ARREST	TFR	27A	12/10/202	12/10/202
FPK24121500002283	CARDIAC/RESPIRATORY ARREST	REF	27A	12/15/202	12/15/202
FPK24122200002345	CARDIAC/RESPIRATORY ARREST	TFR	27A	12/22/202	12/22/202
FPK24122600002379	DIABETIC	TFR	27A	12/26/202	12/26/202
FPK24120300002213	FALL NO INJURY	TFR	27A	12/03/202	12/03/202
FPK24121100002254	FALL NO INJURY	TFR	27A	12/11/202	12/11/202
FPK24121900002321	FALL NO INJURY	NTR	27B	12/19/202	12/19/202
FPK24122500002368	FALL NO INJURY	CL	27A	12/25/202	12/25/202
FPK24120100002206	FALL INJURY	TFR	27B	12/01/202	12/01/202
FPK24121100002251	FALL INJURY	TFR	27A	12/11/202	12/11/202
FPK24121200002260	FALL INJURY	NTR	27B	12/12/202	12/12/202
FPK24121200002261	FALL INJURY	TFR	27A	12/12/202	12/12/202
FPK24121400002278	FALL INJURY	REF	27A	12/14/202	12/14/202
FPK24121400002279	FALL INJURY	TFR	27B	12/14/202	12/14/202
FPK24121300002268	FALL INJURY	TFR	27A	12/13/202	12/13/202
FPK24121500002287	FALL INJURY	NTR	27A	12/15/202	12/15/202
FPK24121200002259	FALL INJURY	TFR	27A	12/12/202	12/12/202
FPK24121800002311	FALL INJURY	TFR	27A	12/18/202	12/18/202
FPK24121600002296	FALL INJURY	TFR	27A	12/16/202	12/16/202
FPK24121800002312	FALL INJURY	REF	27A	12/18/202	12/18/202
FPK24121900002323	FALL INJURY	NTR, REF	27A	12/19/202	12/19/202
FPK24122100002331	FALL INJURY	TFR	27B	12/21/202	12/21/202
FPK24122300002351	FALL INJURY	TFR	27A	12/23/202	12/23/202
FPK24122600002372	FALL INJURY	CL	27A	12/26/202	12/26/202
FPK24122200002344	FALL INJURY	TFR	27A	12/22/202	12/22/202
FPK24122600002377	FALL INJURY	CL	27A	12/26/202	12/26/202
FPK24122700002382	FALL INJURY	TFR	27A	12/27/202	12/27/202
FPK24122200002348	FALL INJURY	TFR	27A	12/22/202	12/22/202
FPK24122800002383	FALL INJURY	TFR	27A	12/28/202	12/28/202
FPK24123100002402	FALL INJURY	TFR	27A	12/31/202	12/31/202
FPK24120100002204	HEMORRHAGE OR LACERATION	TFR	27A	12/01/202	12/01/202
FPK24121300002272	HEMORRHAGE OR LACERATION	TFR	27A	12/13/202	12/13/202
FPK24121900002318	HEMORRHAGE OR LACERATION	TFR	27B	12/19/202	12/19/202
FPK24122300002349	HEMORRHAGE OR LACERATION	TFR	27A	12/23/202	12/23/202
FPK24122000002325	HEMORRHAGE OR LACERATION	TFR	27A	12/20/202	12/20/202
FPK24120200002209	HEART PROBLEMS	TFR	27B	12/02/202	12/02/202
FPK24120500002230	HEART PROBLEMS	TFR	27A	12/05/202	12/05/202
FPK24121100002246	HEART PROBLEMS	REF	27A	12/11/202	12/11/202
FPK24121800002313	HEART PROBLEMS	TFR	27B	12/18/202	12/18/202
FPK24122600002374	HEART PROBLEMS	NTR, REF	27A	12/26/202	12/26/202
FPK24122600002376	HEART PROBLEMS	TFR	27B	12/26/202	12/26/202
FPK24120500002229	UNCONSCIOUS OR FAINTING	TFR	27A	12/05/202	12/05/202
FPK24121100002249	UNCONSCIOUS OR FAINTING	REF	27B	12/11/202	12/11/202
FPK24121500002290	UNCONSCIOUS OR FAINTING	CL	27A	12/15/202	12/15/202

FPK24121500002291	UNCONSCIOUS OR FAINTING	TFR	27A	12/15/202	12/15/202
FPK24122200002342	UNCONSCIOUS OR FAINTING	TFR	27B	12/22/202	12/22/202
FPK24121800002315	UNCONSCIOUS OR FAINTING	TFR	27A	12/18/202	12/18/202
FPK24122600002373	UNCONSCIOUS OR FAINTING	TFR	27B	12/26/202	12/26/202
FPK24122800002385	UNCONSCIOUS OR FAINTING	CL	27A	12/28/202	12/28/202
FPK24120100002202	SICK PERSON	TFR	27A	12/01/202	12/01/202
FPK24120400002228	SICK PERSON	TFR	27A	12/04/202	12/04/202
FPK24120900002242	SICK PERSON	TFR	27B	12/09/202	12/09/202
FPK24120400002227	SICK PERSON	TFR	27A	12/04/202	12/04/202
FPK24121300002274	SICK PERSON	CPD	27Y2	12/13/202	12/13/202
FPK24121700002303	SICK PERSON	TFR	27B	12/17/202	12/17/202
FPK24121300002273	SICK PERSON	TFR	27A	12/13/202	12/13/202
FPK24121500002292	SICK PERSON	NTR, REF	27B	12/15/202	12/15/202
FPK24121700002307	SICK PERSON	REF, CL	27B	12/17/202	12/17/202
FPK24122200002347	SICK PERSON	TFR	27B	12/22/202	12/22/202
FPK24122400002359	SICK PERSON	TFR	27A	12/24/202	12/24/202
FPK24122500002365	SICK PERSON	TFR	27A	12/25/202	12/25/202
FPK24122500002366	SICK PERSON	CL	27B	12/25/202	12/25/202
FPK24122400002361	SICK PERSON	TFR	27B	12/24/202	12/24/202
FPK24122500002369	SICK PERSON	NTR	27B	12/25/202	12/25/202
FPK24122600002371	SICK PERSON	CL	27B	12/26/202	12/26/202
FPK24121800002314	SICK PERSON	TFR	27A	12/18/202	12/18/202
FPK24122900002390	SICK PERSON	CL	27B	12/29/202	12/29/202
FPK24123000002399	SICK PERSON	TFR	27A	12/30/202	12/30/202
FPK24122400002356	SICK PERSON	TFR	27B	12/24/202	12/24/202
FPK24122900002398	SICK PERSON	TFR	27A	12/29/202	12/29/202
FPK24121400002280	STROKE	TFR	27A	12/14/202	12/14/202
FPK24122300002350	STROKE	TFR	27A	12/23/202	12/23/202
FPK24122300002352	STROKE	TFR	27B	12/23/202	12/23/202
FPK24122800002386	STROKE	NTR	27A	12/28/202	12/28/202
FPK24122900002395	STROKE	REF	27A	12/29/202	12/29/202
FPK24120400002214	SEIZURE	TFR	27A	12/04/202	12/04/202
FPK24122700002381	SEIZURE	CL	27B	12/27/202	12/27/202
FPK24122300002354	SEIZURE	TFR	27A	12/23/202	12/23/202
FPK24123100002403	SEIZURE	TFR	27B	12/31/202	12/31/202
FPK24120100002205	TROUBLE BREATHING	TFR	27A	12/01/202	12/01/202
FPK24121100002247	TROUBLE BREATHING	TFR	27A	12/11/202	12/11/202
FPK24121100002253	TROUBLE BREATHING	TFR	27A	12/11/202	12/11/202
FPK24120900002243	TROUBLE BREATHING	TFR	27A	12/09/202	12/09/202
FPK24121400002277	TROUBLE BREATHING	TFR	27B	12/14/202	12/14/202
FPK24121300002269	TROUBLE BREATHING	TFR	27A	12/13/202	12/13/202
FPK24121500002289	TROUBLE BREATHING	TFR	27B	12/15/202	12/15/202
FPK24121500002293	TROUBLE BREATHING	TFR	27A	12/15/202	12/15/202
FPK24121700002305	TROUBLE BREATHING	NTR	27A	12/17/202	12/17/202
FPK24122100002334	TROUBLE BREATHING	REF	27A	12/21/202	12/21/202
FPK24122200002343	TROUBLE BREATHING	TFR	27A	12/22/202	12/22/202
FPK24122300002353	TROUBLE BREATHING	TFR	27B	12/23/202	12/23/202

FPK24122200002346	TROUBLE BREATHING	TFR	27A	12/22/202 12/22/202
FPK24122800002387	TROUBLE BREATHING	CCL	27B	12/28/202 12/28/202
FPK24122800002388	TROUBLE BREATHING	CL	27A	12/28/202 12/28/202
FPK24122900002394	TROUBLE BREATHING	TFR	27B	12/29/202 12/29/202
FPK24122800002384	TROUBLE BREATHING	TFR	27A	12/28/202 12/28/202
FPK24121700002301	UNKNOWN MEDICAL	NTR, UNF	27B	12/17/202 12/17/202
FPK24120700002237	UNKNOWN MEDICAL	TOA, TOA	27Y2	12/07/202 12/07/202
FPK24121700002302	UNKNOWN MEDICAL	DUP	27B	12/17/202 01/01/000
FPK24122600002375	UNKNOWN MEDICAL	TFR	27B	12/26/202 12/26/202
FPK24122900002396	UNKNOWN MEDICAL	UNF	27B	12/29/202 12/29/202
FPK24120500002231	FIRE OR MEDICAL SERVICE CALL	CL	27A	12/05/202 12/05/202
FPK24121200002262	FIRE OR MEDICAL SERVICE CALL	CL	27A	12/12/202 12/12/202
FPK24121200002263	FIRE OR MEDICAL SERVICE CALL	DUP	27A	12/12/202 01/01/000
FPK24121600002298	FIRE OR MEDICAL SERVICE CALL	DUP	27Y2	12/16/202 12/16/202
FPK24122000002327	FIRE OR MEDICAL SERVICE CALL	CL	27A	12/20/202 12/20/202
FPK24122500002364	FIRE OR MEDICAL SERVICE CALL	CL	27A	12/25/202 12/25/202
FPK24122600002378	FIRE OR MEDICAL SERVICE CALL	CL	27A	12/26/202 12/26/202

S4	VEHICLE ACCIDENTS	18
S4H	ACCIDENT HIGHWAY	27
S25	SRUCTURE FIRES	4
S67	MEDICAL CALLS	126
S49	FIRE ALARMS	22
S68	SERVICE CALLS (OTHER)	7
TOTAL		204

FIRSTUNIT	ROUTECLC	CURRENTF	INCIDENTT	PRIMARYOFFICERID1
12/03/202	12/03/202	4	S20	R27
01/01/000	12/02/202	3	S25FI	E27
12/22/202	12/22/202	3	S25FI	R27
12/01/202	12/01/202	1	S25HF	E27
12/19/202	12/19/202	1	S25HH	E27
12/01/202	12/01/202	3	S31IJ	R27
12/14/202	12/14/202	2	S32	R27
12/12/202	12/12/202	1	S33	R227
01/01/000	12/14/202	3	S36IJ	R27
12/10/202	12/10/202	3	S38IJ	R27
01/01/000	12/15/202	3	S38IJ	R27
12/17/202	12/17/202	2	S3H	R27
12/22/202	12/22/202	2	S3H	R27
12/29/202	12/29/202	2	S3I	R27
12/29/202	12/29/202	2	S3I	R27
12/01/202	12/01/202	3	S49CF	E27
12/04/202	12/04/202	3	S49CF	E27
12/04/202	12/04/202	3	S49CF	E27
12/04/202	12/04/202	3	S49CF	E27
01/01/000	12/04/202	3	S49CF	
12/04/202	12/04/202	3	S49CF	E27
01/01/000	12/07/202	3	S49CF	E27
12/16/202	12/16/202	3	S49CF	E27
12/16/202	12/16/202	3	S49CF	E27
12/19/202	12/19/202	3	S49CF	E27
12/22/202	12/22/202	3	S49CF	E7
12/22/202	12/22/202	3	S49CF	E27
12/22/202	12/22/202	3	S49CF	E7
01/01/000	12/22/202	3	S49CF	
12/07/202	12/07/202	3	S49F	E27
12/21/202	12/21/202	3	S49F	E27
12/08/202	12/08/202	3	S49HH	E27
01/01/000	12/18/202	3	S49HH	E27
12/21/202	12/21/202	3	S49HH	E27
12/04/202	12/04/202	3	S49MF	E27
12/04/202	12/04/202	3	S49MF	E27
12/08/202	12/08/202	3	S49MF	E27
12/27/202	12/27/202	1	S4E	R27
12/30/202	12/30/202	1	S4E	R27
12/02/202	12/02/202	2	S4H	R27
12/04/202	12/04/202	2	S4H	R27
01/01/000	12/04/202	2	S4H	R7
12/04/202	12/04/202	2	S4H	R27
12/04/202	12/04/202	2	S4H	R27
12/06/202	12/06/202	2	S4H	R27
12/08/202	12/08/202	2	S4H	R27

12/11/202	12/11/202	2	S4H R7
01/01/000	12/12/202	2	S4H
12/12/202	12/12/202	2	S4H R27
01/01/000	12/12/202	2	S4H
12/05/202	12/05/202	2	S4H R27
12/13/202	12/13/202	2	S4H R27
12/04/202	12/04/202	2	S4H R7
12/16/202	12/16/202	2	S4H R27
12/16/202	12/16/202	2	S4H R27
12/17/202	12/17/202	2	S4H R27
01/01/000	12/17/202	2	S4H
01/01/000	12/17/202	2	S4H
12/19/202	12/19/202	2	S4H R27
12/21/202	12/21/202	2	S4H R227
12/24/202	12/24/202	2	S4H R227
12/13/202	12/13/202	2	S4H R27
12/29/202	12/29/202	2	S4H R27
12/30/202	12/30/202	2	S4H R27
12/06/202	12/06/202	2	S4I R27
12/11/202	12/11/202	2	S4I R27
12/12/202	12/12/202	2	S4I R227
12/12/202	12/12/202	2	S4I R27
12/13/202	12/13/202	2	S4I R27
12/15/202	12/15/202	2	S4I R27
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12/17/202	12/17/202	2	S4I R27
12/22/202	12/22/202	2	S4I R27
12/24/202	12/24/202	2	S4I R27
12/24/202	12/24/202	2	S4I R27
12/29/202	12/29/202	2	S4I R27
12/21/202	12/21/202	2	S4I R27
12/24/202	12/24/202	2	S4I R27
12/03/202	12/03/202	2	S67AP R27
01/01/000	12/11/202	2	S67AP R7
12/13/202	12/13/202	2	S67AP R27
12/25/202	12/25/202	2	S67AP R27
12/11/202	12/11/202	1	S67AR R7
12/25/202	12/25/202	3	S67BP R7
12/02/202	12/02/202	1	S67CP R227
12/06/202	12/06/202	1	S67CP R7
12/14/202	12/14/202	1	S67CP R27
12/15/202	12/15/202	1	S67CP R227
12/15/202	12/15/202	1	S67CP R27
12/18/202	12/18/202	1	S67CP R227
12/20/202	12/20/202	1	S67CP R27
12/20/202	12/20/202	1	S67CP R227
12/25/202	12/26/202	1	S67CP R227

12/21/202 12/21/202 1	S67CP	R27
12/25/202 12/25/202 1	S67CP	R27
12/29/202 12/29/202 1	S67CP	R227
12/10/202 12/10/202 1	S67CR	R227
12/15/202 12/15/202 1	S67CR	R227
12/22/202 12/22/202 1	S67CR	R227
12/26/202 12/26/202 2	S67DB	R27
12/03/202 12/04/202 4	S67F	R27
12/11/202 12/11/202 4	S67F	E27
12/19/202 12/19/202 4	S67F	E7
12/25/202 12/25/202 4	S67F	E27
12/01/202 12/01/202 3	S67FI	R27
12/11/202 12/11/202 3	S67FI	Q7
12/12/202 12/12/202 3	S67FI	E27
12/12/202 12/12/202 3	S67FI	R27
12/14/202 12/14/202 3	S67FI	R227
12/14/202 12/14/202 3	S67FI	R27
12/13/202 12/13/202 3	S67FI	R27
12/15/202 12/15/202 3	S67FI	R27
12/12/202 12/12/202 3	S67FI	R27
12/18/202 12/18/202 3	S67FI	R27
12/16/202 12/16/202 3	S67FI	R27
12/18/202 12/18/202 3	S67FI	R27
12/19/202 12/19/202 3	S67FI	R27
12/21/202 12/21/202 3	S67FI	R27
12/23/202 12/23/202 3	S67FI	R227
12/26/202 12/26/202 3	S67FI	R27
12/22/202 12/22/202 3	S67FI	R27
12/26/202 12/26/202 3	S67FI	R227
12/27/202 12/27/202 3	S67FI	R27
12/22/202 12/22/202 3	S67FI	R27
12/28/202 12/28/202 3	S67FI	R27
12/31/202 12/31/202 3	S67FI	R27
12/01/202 12/01/202 2	S67HM	R27
12/13/202 12/13/202 2	S67HM	R227
12/19/202 12/19/202 2	S67HM	R27
12/23/202 12/23/202 2	S67HM	R27
12/20/202 12/20/202 2	S67HM	R27
12/02/202 12/02/202 2	S67HP	R27
12/05/202 12/05/202 2	S67HP	R27
12/11/202 12/11/202 2	S67HP	R27
12/18/202 12/18/202 2	S67HP	R227
12/26/202 12/26/202 2	S67HP	R27
12/26/202 12/26/202 2	S67HP	R227
12/05/202 12/05/202 1	S67PO	R227
12/11/202 12/11/202 1	S67PO	R27
12/15/202 12/15/202 1	S67PO	R227

12/15/2021	12/15/2021	S67PO R27
12/22/2021	12/22/2021	S67PO R27
12/18/2021	12/18/2021	S67PO R27
12/26/2021	12/26/2021	S67PO R27
12/28/2021	12/28/2021	S67PO R227
12/01/2024	12/01/2024	S67SP R27
12/04/2024	12/04/2024	S67SP R27
12/09/2024	12/09/2024	S67SP R27
12/04/2024	12/04/2024	S67SP R27
12/13/2024	12/13/2024	S67SP R27
12/17/2024	12/17/2024	S67SP R27
12/13/2024	12/13/2024	S67SP R27
12/15/2024	12/15/2024	S67SP R227
12/17/2024	12/17/2024	S67SP R27
12/22/2024	12/22/2024	S67SP R227
12/24/2024	12/24/2024	S67SP R27
12/25/2024	12/25/2024	S67SP R27
12/25/2024	12/25/2024	S67SP R227
12/24/2024	12/24/2024	S67SP R27
12/25/2024	12/25/2024	S67SP R27
12/26/2024	12/26/2024	S67SP R27
12/18/2024	12/18/2024	S67SP R27
12/29/2024	12/29/2024	S67SP R27
12/30/2024	12/30/2024	S67SP R27
12/24/2024	12/24/2024	S67SP R27
12/29/2024	12/29/2024	S67SP R27
12/14/2023	12/14/2023	S67ST R227
12/23/2022	12/23/2022	S67ST R227
12/23/2022	12/23/2022	S67ST R27
12/28/2022	12/28/2022	S67ST R227
12/29/2021	12/29/2021	S67ST R27
12/04/2022	12/04/2022	S67SZ R227
12/27/2022	12/27/2022	S67SZ R27
12/23/2022	12/23/2022	S67SZ R27
12/31/2022	12/31/2022	S67SZ R27
12/01/2022	12/01/2022	S67TB R227
12/11/2022	12/11/2022	S67TB R27
12/11/2022	12/11/2022	S67TB R227
12/09/2022	12/09/2022	S67TB R27
12/14/2022	12/14/2022	S67TB R27
12/13/2022	12/13/2022	S67TB R227
12/15/2022	12/15/2022	S67TB R27
12/15/2022	12/15/2022	S67TB R227
12/17/2022	12/17/2022	S67TB R231
12/21/2022	12/21/2022	S67TB R227
12/22/2022	12/22/2022	S67TB R227
12/23/2022	12/23/2022	S67TB R27

12/22/202	12/22/202	2	S67TB R227
01/01/000	12/28/202	2	S67TB R27
12/28/202	12/28/202	2	S67TB R27
12/29/202	12/29/202	2	S67TB R27
12/28/202	12/28/202	2	S67TB R227
12/17/202	12/17/202	3	S67UM R27
01/01/000	12/07/202	3	S67UM R27
01/01/000	12/17/202	3	S67UM
12/26/202	12/26/202	3	S67UM R27
01/01/000	12/29/202	3	S67UM R27
12/05/202	12/05/202	4	S68 E27
12/12/202	12/12/202	4	S68 E27
01/01/000	12/12/202	4	S68
01/01/000	12/16/202	4	S68 R90
12/20/202	12/20/202	4	S68 E60
12/25/202	12/25/202	4	S68 E27
12/26/202	12/26/202	4	S68

INCIDENTNUMBER	INCIDENTTYPEDESCRIPTION	ALLDISPOS	BEATNAM
FPK24112900002191	MENTAL ILLNESS	REF	27A
FPK24110200001992	COMMERCIAL STRUCTURE FIRE	CFD, CL	27B
FPK24111000002038	GAS LEAK/GAS ODOR	CL	27B
FPK24111000002036	MULTIFAMILY STRUCTURE FIRE (GREATER THAN	CL, CL	27A
FPK24111000002039	OUTSIDE FIRE	CL	27A
FPK24111600002093	OUTSIDE FIRE	UNF	27Y2
FPK24111200002050	ODOR (STRANGE/UNKNOWN)	CL	27B
FPK24112000002118	VEHICLE FIRE	CL	27Y1
FPK24112100002125	VEHICLE FIRE	CL	27B
FPK24112300002147	VEHICLE FIRE	CL	27Y2
FPK24112400002154	VEHICLE FIRE	CL	27B
FPK24112900002190	VEHICLE FIRE	CL	27Y2
FPK24111800002102	ASSAULT	CPD	27B
FPK24110800002028	DOMESTIC DISTURBANCE	CL	27A
FPK24112900002187	DOMESTIC DISTURBANCE	CFD	27A
FPK24112900002188	DOMESTIC DISTURBANCE	NTR	27A
FPK24110200001990	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24111200002052	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24111200002055	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24111200002059	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B
FPK24111300002063	FIRE ALARM - COMMERCIAL STRUCTURE	CCL	27B
FPK24111800002103	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B
FPK24112200002130	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24112200002132	FIRE ALARM - COMMERCIAL STRUCTURE	CCL	27A
FPK24112200002133	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24112300002137	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24112400002158	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27B
FPK24112500002164	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24112700002182	FIRE ALARM - COMMERCIAL STRUCTURE	CL	27A
FPK24112300002136	FIRE ALARM	CL	27A
FPK24110400002007	MEDICAL ALARM	CL	27B
FPK24110400002008	MEDICAL ALARM	CL	27B
FPK24112300002138	FIRE ALARM - MULTI-FAMILY	CL	27A
FPK24112300002141	FIRE ALARM - MULTI-FAMILY	CL	27A
FPK24112400002149	FIRE ALARM - MULTI-FAMILY	CL	27A
FPK24112400002152	FIRE ALARM - MULTI-FAMILY	CL	27A
FPK24112400002153	FIRE ALARM - MULTI-FAMILY	CL	27A
FPK24112800002186	ACCIDENT ROLLOVER OR EXTRICATION	CL, TFR	27Y1
FPK24110300001995	ACCIDENT HIGHWAY	COS	27Y2
FPK24110300002001	ACCIDENT HIGHWAY	CL	27Y1
FPK24110300002002	ACCIDENT HIGHWAY	DUP	27Y1
FPK24110400002010	ACCIDENT HIGHWAY	CL	27Y2
FPK24110900002032	ACCIDENT HIGHWAY	TFR, TFR, T	27Y1
FPK24111100002045	ACCIDENT HIGHWAY	CL	27Y1
FPK24111100002042	ACCIDENT HIGHWAY	NTR, NTR	27Y2
FPK24111200002060	ACCIDENT HIGHWAY	NTR	27Y2

FPK24111600002095	ACCIDENT HIGHWAY	TOA, TOA,	27Y2
FPK24111600002091	ACCIDENT HIGHWAY	CL, CL	27Y2
FPK24111900002112	ACCIDENT HIGHWAY	REF	27Y2
FPK24112300002144	ACCIDENT HIGHWAY	NTR, CL	27Y1
FPK24112300002145	ACCIDENT HIGHWAY	CL	27Y1
FPK24112600002165	ACCIDENT HIGHWAY	REF, TFR	27Y1
FPK24112600002166	ACCIDENT HIGHWAY	DUP	27Y1
FPK24112600002168	ACCIDENT HIGHWAY	CL	27Y1
FPK24112700002176	ACCIDENT HIGHWAY	DUP	27Y2
FPK24112700002181	ACCIDENT HIGHWAY	NTR	27Y1
FPK24113000002197	ACCIDENT HIGHWAY	NTR	27Y1
FPK24110600002019	ACCIDENT WITH INJURIES	NTR	27B
FPK24110900002035	ACCIDENT WITH INJURIES	CL	27B
FPK24111300002061	ACCIDENT WITH INJURIES	TFR	27B
FPK24111300002066	ACCIDENT WITH INJURIES	DUP	27B
FPK24111900002114	ACCIDENT WITH INJURIES	CL, NTR	27B
FPK24112400002157	ACCIDENT WITH INJURIES	TFR	27B
FPK24112700002175	ACCIDENT WITH INJURIES	TFR	27Y1
FPK24112100002122	ACCIDENT WITH INJURIES	NTR	27A
FPK24110100001984	ABDOMINAL PAIN	TFR	27A
FPK24110400002003	ABDOMINAL PAIN	TFR	27A
FPK24111100002047	ABDOMINAL PAIN	TFR	27B
FPK24111000002037	ABDOMINAL PAIN	DUP	27A
FPK24111400002074	ABDOMINAL PAIN	CL	27A
FPK24110300001994	ABDOMINAL PAIN	TFR	27A
FPK24111200002058	ALLERGIC REACTION	TFR	27A
FPK24111100002044	BACK PAIN	TFR	27A
FPK24112300002143	BACK PAIN	REF	27B
FPK24112500002163	BACK PAIN	TFR	27A
FPK24112600002167	BACK PAIN	CL	27A
FPK24112800002183	BACK PAIN	TFR	27A
FPK24111500002087	CHEST PAINS NON-TRAUMATIC	TFR	27B
FPK24112000002119	CHEST PAINS NON-TRAUMATIC	TFR	27A
FPK24112100002128	CHEST PAINS NON-TRAUMATIC	TFR	27A
FPK24112800002185	CHEST PAINS NON-TRAUMATIC	TFR	27A
FPK24111300002067	CARDIAC/RESPIRATORY ARREST	NTR	27B
FPK24112500002160	CARDIAC/RESPIRATORY ARREST	CL	27B
FPK24111100002043	DIABETIC	CL	27B
FPK24111100002049	DIABETIC	TFR	27B
FPK24111400002077	DIABETIC	TFR	27A
FPK24112900002192	DIABETIC	TFR	27B
FPK24110800002023	FALL NO INJURY	CL	27A
FPK24111900002113	FALL NO INJURY	TFR	27A
FPK24110100001987	FALL INJURY	UNF	27B
FPK24110100001988	FALL INJURY	TFR	27B
FPK24110300001997	FALL INJURY	NTR	27A
FPK24110300002000	FALL INJURY	TFR	27A

FPK24110400002009	FALL INJURY	TFR	27A
FPK24111000002040	FALL INJURY	TFR	27A
FPK24111000002041	FALL INJURY	TFR	27A
FPK24110800002027	FALL INJURY	TFR	27A
FPK24111300002062	FALL INJURY	COS	27A
FPK24111400002073	FALL INJURY	NTR	27A
FPK24111400002075	FALL INJURY	TFR	27A
FPK24111600002088	FALL INJURY	TFR	27A
FPK24111600002089	FALL INJURY	TFR	27A
FPK24111200002054	FALL INJURY	TFR	27B
FPK24111500002086	FALL INJURY	TFR	27A
FPK24111200002056	FALL INJURY	TFR	27A
FPK24111300002068	FALL INJURY	TFR	27A
FPK24112200002131	FALL INJURY	TFR	27B
FPK24111800002105	FALL INJURY	TFR	27A
FPK24112300002140	FALL INJURY	CL	27B
FPK24112400002148	FALL INJURY	REF	27A
FPK24112500002161	FALL INJURY	TFR	27B
FPK24112300002139	FALL INJURY	TFR	27A
FPK24112200002134	FALL INJURY	TFR	27A
FPK24112700002171	FALL INJURY	TFR	27A
FPK24112700002179	FALL INJURY	TFR	27A
FPK24112900002195	FALL INJURY	TFR	27A
FPK24112900002196	FALL INJURY	TFR	27A
FPK24112700002177	FALL INJURY	CL	27A
FPK24113000002198	FALL INJURY	TFR	27A
FPK24113000002199	FALL INJURY	REF	27A
FPK24110800002024	HEMORRHAGE OR LACERATION	TFR	27A
FPK24111200002053	HEMORRHAGE OR LACERATION	TFR	27B
FPK24111300002071	HEMORRHAGE OR LACERATION	TFR	27B
FPK24111400002080	HEMORRHAGE OR LACERATION	TFR	27A
FPK24111900002109	HEMORRHAGE OR LACERATION	TFR	27A
FPK24112400002151	HEMORRHAGE OR LACERATION	TFR	27B
FPK24112800002184	HEMORRHAGE OR LACERATION	TFR	27A
FPK24110800002026	HEART PROBLEMS	TFR	27A
FPK24111500002085	HEART PROBLEMS	TFR	27B
FPK24110900002033	INJURY	TFR	27A
FPK24110300001998	INJURY	TFR	27B
FPK24111600002094	INJURY	TFR	27B
FPK24110400002006	OVERDOSE OR POISONING	TFR	27B
FPK24111100002046	OVERDOSE OR POISONING	TFR	27A
FPK24110100001986	UNCONSCIOUS OR FAINTING	NTR	27A
FPK24110400002004	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24110400002005	UNCONSCIOUS OR FAINTING	TFR	27B
FPK24110500002013	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24110600002014	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24110600002018	UNCONSCIOUS OR FAINTING	TFR	27B

FPK24111300002064	UNCONSCIOUS OR FAINTING	CL	27A
FPK24111700002101	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24111400002079	UNCONSCIOUS OR FAINTING	CL	27A
FPK24112100002120	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24112300002135	UNCONSCIOUS OR FAINTING	CCL, CCL	27B
FPK24112100002126	UNCONSCIOUS OR FAINTING	UNF	27A
FPK24111700002099	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24112000002116	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24112400002156	UNCONSCIOUS OR FAINTING	TFR	27B
FPK24112500002159	UNCONSCIOUS OR FAINTING	CCL	27B
FPK24112900002189	UNCONSCIOUS OR FAINTING	TFR	27A
FPK24112300002146	UNCONSCIOUS OR FAINTING	UNF	27Y2
FPK24110100001989	SICK PERSON	TFR	27A
FPK24110500002012	SICK PERSON	TFR	27B
FPK24110200001991	SICK PERSON	CL	27A
FPK24110600002017	SICK PERSON	NTR, REF	27A
FPK24110200001993	SICK PERSON	TFR	27A
FPK24110600002016	SICK PERSON	TFR	27A
FPK24110900002034	SICK PERSON	CCL	27A
FPK24110800002025	SICK PERSON	TFR	27A
FPK24111300002070	SICK PERSON	NTR	27B
FPK24110400002011	SICK PERSON	TFR	27B
FPK24111400002076	SICK PERSON	TFR	27A
FPK24111500002084	SICK PERSON	TFR	27A
FPK24111800002104	SICK PERSON	TFR	27B
FPK24111900002106	SICK PERSON	TFR	27A
FPK24111900002108	SICK PERSON	NTR	27Y2
FPK24111700002100	SICK PERSON	NTR	27B
FPK24111900002107	SICK PERSON	TFR	27A
FPK24112100002121	SICK PERSON	TFR	27A
FPK24112100002127	SICK PERSON	TFR	27A
FPK24112300002142	SICK PERSON	TFR	27A
FPK24112400002155	SICK PERSON	TFR	27B
FPK24112100002123	SICK PERSON	TFR	27A
FPK24111300002065	SICK PERSON	TFR	27A
FPK24112700002170	SICK PERSON	TFR	27A
FPK24112900002193	SICK PERSON	TFR	27A
FPK24112900002194	SICK PERSON	TFR	27A
FPK24112100002124	STROKE	TFR	27A
FPK24112200002129	STROKE	TFR	27A
FPK24110100001985	SEIZURE	NTR	27A
FPK24110300001996	SEIZURE	TFR	27A
FPK24111600002092	SEIZURE	TFR	27A
FPK24111700002098	SEIZURE	TFR	27A
FPK24111900002110	SEIZURE	CL	27B
FPK24112000002115	SEIZURE	TFR	27A
FPK24110600002015	TROUBLE BREATHING	TFR	27B

FPK24110800002021	TROUBLE BREATHING	TFR	27A
FPK24110900002030	TROUBLE BREATHING	TFR	27A
FPK24110700002020	TROUBLE BREATHING	TFR	27A
FPK24110900002031	TROUBLE BREATHING	CL, CL	27A
FPK24110800002029	TROUBLE BREATHING	TFR	27B
FPK24111200002057	TROUBLE BREATHING	TFR	27B
FPK24110800002022	TROUBLE BREATHING	REF	27B
FPK24111400002078	TROUBLE BREATHING	TFR	27A
FPK24111400002081	TROUBLE BREATHING	TFR	27B
FPK24111700002096	TROUBLE BREATHING	REF	27B
FPK24111700002097	TROUBLE BREATHING	TFR	27B
FPK24111600002090	TROUBLE BREATHING	TFR	27A
FPK24112000002117	TROUBLE BREATHING	TFR	27A
FPK24111200002051	TROUBLE BREATHING	TFR	27A
FPK24111500002082	TROUBLE BREATHING	TFR	27A
FPK24112500002162	TROUBLE BREATHING	TFR	27A
FPK24112700002173	TROUBLE BREATHING	COS	27B
FPK24112700002178	TROUBLE BREATHING	TFR	27A
FPK24112700002180	TROUBLE BREATHING	TFR	27A
FPK24110300001999	FIRE OR MEDICAL SERVICE CALL	CL	27A
FPK24111100002048	FIRE OR MEDICAL SERVICE CALL	CL	27B
FPK24111300002069	FIRE OR MEDICAL SERVICE CALL	CL	27A
FPK24111900002111	FIRE OR MEDICAL SERVICE CALL	CL	27A
FPK24111500002083	FIRE OR MEDICAL SERVICE CALL	TOA	27B
FPK24112400002150	FIRE OR MEDICAL SERVICE CALL	CL	27A
FPK24112700002169	FIRE OR MEDICAL SERVICE CALL	CL	27A
FPK24112700002172	FIRE OR MEDICAL SERVICE CALL	UNF	27B
FPK24112700002174	FIRE OR MEDICAL SERVICE CALL	TFR	27B

S25 FIRE	11
S4 ACCIDENT	8
S4 HIGHWAY	20
S49 ALARM	21
S67 MEDICAL	146
S68 SERVICE CALL	9
TOTAL	215

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11/10/2024 08:03:14	11/10/2024 08:03:28	11/10/2024 08:10:26
11/10/2024 03:44:35	11/10/2024 03:45:09	11/10/2024 03:52:05
11/10/2024 12:59:09	11/10/2024 12:59:33	11/10/2024 13:06:15
11/16/2024 15:21:56	11/16/2024 15:22:14	01/01/0001 00:00:00
11/12/2024 00:56:31	11/12/2024 00:56:46	11/12/2024 01:04:47
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11/14/2024 21:54:46	11/14/2024 21:55:02	11/14/2024 22:08:00
11/17/2024 02:55:12	11/17/2024 02:55:38	11/17/2024 03:04:01
11/17/2024 04:21:06	11/17/2024 04:21:29	11/17/2024 04:28:40
11/16/2024 12:30:30	11/16/2024 12:30:45	11/16/2024 12:36:40
11/20/2024 11:09:28	11/20/2024 11:09:43	11/20/2024 11:15:20
11/12/2024 03:11:43	11/12/2024 03:11:54	11/12/2024 03:19:13
11/15/2024 01:01:06	11/15/2024 01:01:26	11/15/2024 01:07:36
11/25/2024 15:51:03	11/25/2024 15:51:18	11/25/2024 15:55:42
11/27/2024 10:26:30	11/27/2024 10:26:50	11/27/2024 10:32:41
11/27/2024 12:45:05	11/27/2024 12:45:24	11/27/2024 12:50:54
11/27/2024 18:25:32	11/27/2024 18:25:53	11/27/2024 18:30:17
11/03/2024 14:18:26	11/03/2024 14:18:46	11/03/2024 14:23:11
11/11/2024 19:30:04	11/11/2024 19:30:20	11/11/2024 19:40:08
11/13/2024 19:50:18	11/13/2024 19:50:33	11/13/2024 19:57:17
11/19/2024 20:25:02	11/19/2024 20:25:13	11/19/2024 20:31:38
11/15/2024 04:53:39	11/15/2024 04:54:22	01/01/0001 00:00:00
11/24/2024 02:28:03	11/24/2024 02:28:30	11/24/2024 02:33:18
11/27/2024 06:50:14	11/27/2024 06:50:26	11/27/2024 06:57:21
11/27/2024 08:51:24	11/27/2024 08:51:54	11/27/2024 08:58:06
11/27/2024 11:48:04	11/27/2024 11:48:49	11/27/2024 11:54:00

ROUTECLOSEDTIME	INCIDENTTYPECODE
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11/02/2024 14:43:27	S25CF
11/10/2024 08:19:01	S25GL
11/10/2024 04:12:32	S25MF
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11/16/2024 15:33:37	S25OF
11/12/2024 01:08:39	S25OR
11/20/2024 12:51:50	S25VF
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11/23/2024 23:49:00	S25VF
11/24/2024 08:58:34	S25VF
11/29/2024 13:14:44	S25VF
11/18/2024 02:24:26	S31IJ
11/08/2024 20:37:23	S38IJ
11/29/2024 00:16:00	S38IJ
11/29/2024 00:33:14	S38IJ
11/02/2024 02:07:19	S49CF
11/12/2024 04:28:39	S49CF
11/12/2024 10:56:04	S49CF
11/12/2024 21:51:21	S49CF
11/13/2024 04:09:02	S49CF
11/18/2024 06:41:59	S49CF
11/22/2024 09:22:38	S49CF
11/22/2024 20:09:26	S49CF
11/22/2024 20:38:11	S49CF
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11/24/2024 04:29:15	S49MF
11/24/2024 06:43:46	S49MF
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11/03/2024 07:12:03	S4H
11/03/2024 17:39:12	S4H
11/03/2024 16:58:28	S4H
11/04/2024 15:44:38	S4H
11/09/2024 07:30:41	S4H
11/11/2024 18:05:14	S4H
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11/13/2024 00:16:19	S4H

11/16/2024 22:41:58	S4H
11/16/2024 12:51:30	S4H
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11/23/2024 12:19:32	S4H
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11/26/2024 12:40:53	S4H
11/26/2024 11:53:55	S4H
11/26/2024 20:02:55	S4H
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11/27/2024 19:59:36	S4H
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11/06/2024 16:25:17	S4I
11/09/2024 16:58:07	S4I
11/13/2024 03:45:29	S4I
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11/19/2024 22:30:43	S4I
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11/08/2024 07:09:46	S67F
11/19/2024 22:43:37	S67F
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11/03/2024 10:19:51	S67FI
11/03/2024 16:45:00	S67FI

11/04/2024 13:23:09	S67FI
11/10/2024 18:58:56	S67FI
11/10/2024 23:49:55	S67FI
11/08/2024 19:41:45	S67FI
11/13/2024 03:50:22	S67FI
11/14/2024 00:34:46	S67FI
11/14/2024 06:53:53	S67FI
11/16/2024 09:08:07	S67FI
11/16/2024 10:54:40	S67FI
11/12/2024 10:07:55	S67FI
11/15/2024 14:55:13	S67FI
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11/13/2024 15:35:36	S67FI
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11/19/2024 00:55:57	S67FI
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11/19/2024 14:55:23	S67HM
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11/19/2024 09:53:21	S67SP
11/21/2024 07:43:55	S67SP
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11/16/2024 15:16:40	S67SZ
11/17/2024 09:23:46	S67SZ
11/19/2024 16:12:58	S67SZ
11/20/2024 03:59:03	S67SZ
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11/08/2024 01:08:50	S67TB
11/09/2024 05:40:41	S67TB
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11/24/2024 03:33:09	S68
11/27/2024 07:29:19	S68
11/27/2024 09:04:16	S68
11/27/2024 12:24:07	S68

Monthly Commission Report
End of November & December 2024

November 26, 2024

- **Case #22-2411-020281:**
  Incident:
  Location: All-Ways Towing
  Details: Units responded to All-Ways Towing regarding an unknown suspect who regained possession of his girlfriend's vehicle without paying the fee. All-Ways Towing refused to prosecute.
- **Case #22-2411-020281**:
  Incident: **Traffic Control**
  Location: Hallandale Beach Blvd.
  Details: Units directed traffic away from the CSX railroad tracks due to a malfunction of the traffic control device (Railroad gate) with the assistance of Hallandale Beach PD.
- **Officer Safety:**
  AOA Sunrise PD. Units attempted to locate a blue Corvette bearing FL tag BM48NE registered to DEONDRE YVNER FREDERIC. He was involved in a shooting and is suicidal. The vehicle PINGED at 3140 Hallandale. We BOLO the area and met with negative results.
- **Case #2411-020311:**
  Incident: **Burglary Auto**
  Location: 4003 SW 52nd Avenue
  Details: Officers responded to 4003 SW 52nd Avenue in reference to two B/Ms wearing all-black clothing, possibly trying door handles on parked vehicles. The subjects fled the area on foot. Officers arrived and located a 2019 silver Hyundai Elantra (KNP X83) with a shattered passenger rear window. Officers attempted multiple times to locate the victim at the registered owner's address, but no one answered the door. Officers observed surveillance cameras outside of a residence that could have possibly captured the suspects fleeing the area and attempted to make contact with that resident. The potential victim's vehicle could not be processed due to the condensation on the vehicle.
- **Case #2411-020305**
  Incident: Information
  Location: Scarlett's Cabaret
  Details: Officers responded to Scarlett's Cabaret regarding an adult male who had been reported as a missing person endangered earlier this shift (Seminole

PD) and had possibly been seen at this location. Officers obtained all the necessary information, and rather than referring the case to Hollywood or Seminole, she took extra steps to contact the individual's friends via telephone. Ultimately, she convinced the missing person to return to his residence.

November 27, 2024

- **Case #22-2411-020311**
  Incident: **Burglary Conveyance**
  Location: Multiple
  Details: Officers responded to seven burglary incidents involving vehicles at - 4005 SW 52nd Avenue, 4803 SW 41st Street, 4815 SW 41st Street, 4807 SW 41st Street, 4005 SW 52nd Avenue, 4813 SW 41st Street, 3911 SW 52nd Avenue - all close. The suspect(s) used an unknown object to shatter the windows of each vehicle to gain access.
- **Case #22-2411-020323**
  Incident: **Auto Theft Attempt**
  Location: 4813 SW 41st Street #124
  Details: Officers responded to a report of a burglary conveyance at 4813 SW 41st Street #124. The investigation revealed that the suspect(s) attempted to steal the vehicle. The victim reported that she parked her four-door silver 2017 Nissan Altima. The victim found the driver's side rear window had been smashed. Upon further inspection, she noticed that the suspect(s) had tried to steal her vehicle by breaking the steering column, but they were unsuccessful. The vehicle was processed, and six latent fingerprints were lifted from the driver's side. These prints will be submitted for processing. The estimated damage to the vehicle is valued at $3,000.00.
- **Case #22-2411-020334:**
  Incident: **Petit Theft**
  Location: 139 W Lake Shore Drive
  Details: Officers responded to 139 W Lake Shore Drive regarding five packages that were delivered and stolen from the front porch. The total loss of property was $322.00. There was no video surveillance or witnesses to this incident.

November 28, 2024

- **Case #22-2411-020373**
  Incident: **Grand Theft of a Firearm**
  Location: 3161 SW 54th Avenue
  Details: Officers responded to 3161 SW 54th Avenue regarding the theft of a firearm. The victim reported that he left his firearm, which was in a black case, and discovered the missing black case containing his firearm. The stolen firearm was a black Glock 19 (Gen 5), loaded with nine 9mm rounds and accompanied by two additional empty magazine clips.
- **Case #22-2411-020378**
  Incident: **AOA to FHP**
  Location: I-95 southbound at Ives Dairy Road

Details: Officers responded to a rollover incident involving a black four-door BMW SUV on I-95 southbound at Ives Dairy Road. The occupants, which included one adult and three juveniles, managed to exit the vehicle without sustaining any injuries. The vehicle's engine was ejected, and fuel leaked onto the highway. As a result, three lanes of traffic had to be closed. Fire Rescue was called to assist, and an officer from the Hallandale Police Department responded.

November 29, 2024

- **Case #22-2411-020406**
  Incident: **Marchman Act**
  Location: King Cash Pawn
  Details: Units responded to King Cash Pawn regarding a drunk w/m drinking a large bottle of vodka. He was heavily intoxicated, bothering customers who were in the parking lot. The w/m yanked off the mailbox off the front door and broke the vodka bottle in front of the business. He urinated on himself and fell, causing self-injury. A vehicle was in the plaza, and all four doors were open. The vehicle was associated with the w/m. The w/m was Marchman Acted, issued an NTA for disorderly conduct, the store manager refused to prosecute, and the vehicle was secured
- **Case #2411-020421**
  Incident: **Domestic Disturbance**
  Location: 5100 SW 41st #315
  Details: Officers responded to 5100 SW 41st #315 in reference to a domestic disturbance. Upon arrival, officers spoke with the victim, who stated that her ex-boyfriend (with whom she has a child) was upset that she was not home most of the day. When the victim returned home and opened the front door, the suspect spit in the victim’s face and took her car keys. The suspect then left the area in the victim’s vehicle. The victim was not injured and refused Fire Rescue. The victim did not wish to prosecute or provide a statement to officers; however, due to the incident qualifying as domestic, a non-in-custody PC Affidavit was completed for the suspect.

November 30, 2024

- **Case #22-2411-20462**
  Incident: **Stolen Vehicle – delayed**
  Location: 3615 SW 52nd
  Details: A victim never reported a stolen car out of Pembroke Pines. His girlfriend blocked the vehicle at 3615 SW 52nd. Units tactically cleared the area and notified Pembroke Pines, who responded.
- **Case #2412-020483**
  Incident: **Reckless Driving**
  Location: intersection of SW 56th Avenue and County Line Road
  Details: Officers again responded to the intersection of SW 56th Avenue and County Line Road regarding vehicles conducting an intersection takeover. Once again, the same black Chevrolet Camaro was doing donuts at the intersection

and fled upon officers arriving. The vehicle's tag was covered with a cloth, and the driver (b/m) and front seat passenger (w/f) wore masks to cover their faces. This same group of vehicles continues to create dangerous situations in the Pembroke Park / West Park / Miramar / Pembroke Pines area. Officers will develop a plan to try to address these same individuals.

December 1, 2024

- **Case #2412-020504**
  Incident: **Domestic Battery**
  Location: 3177 SW 54th Avenue
  Details: Officers responded to 3177 SW 54th Avenue regarding a domestic disturbance. Upon arrival, officers made contact with the husband and wife, who were having a domestic disturbance. Officers spoke with the husband (victim), who stated that his wife (suspect) was upset about not being able to locate missing identity documents. She claimed the husband was keeping the documents from the wife. The husband stated that his wife became enraged, grabbed his shirt with her right hand, and retrieved an ice pick with his left hand. The husband stated that the wife threatened him with the ice pick, and he was concerned that she was going to stab him with the ice pick. The husband said she eventually put the ice pick down but still held onto his shirt. While doing this, the husband stated the wife scratched his chest. The wife stated that her husband had retrieved her identity documents and would not return them. She stated that she became upset and grabbed his shirt. Officers observed a scratch on the husband's chest, which the husband refused medical attention. The wife was arrested and transported to BSO Main Jail for Aggravated Assault (Domestic) and Simple Battery (Domestic).
- **Case #2412-020513**
  Incident: **DUI**
  Location: 2920 SW 30 Avenue (Scarlett's Cabaret)
  Details: Officers were dispatched to 2920 SW 30 Avenue, Pembroke Park, FL. (Scarlett's Cabaret) in reference to a H/M who was possibly intoxicated and was last seen driving west on W. Hallandale Beach Boulevard from this location. Officers located the vehicle, observed it make an improper right turn into the wrong lane, and conducted a traffic stop. They made contact with the H/M, who had glassy eyes and the smell of an alcoholic beverage emanating from his person as he spoke. The H/M was asked to exit the vehicle, and he complied. BSO DUI Task Force responded and conducted a DUI Investigation and subsequently arrested the H/M for DUI. The H/M was transported to BSO Main Jail.

December 2, 2024

- **Case #22-2412-020530**
  Incident: **Petit Theft**
  Location: 3996 Pembroke Road (Race Trac Gas Station)
  Details: Officers responded regarding a theft incident. The manager reported that three suspects, two Black males and one White male, entered the store and left with two cases of beer, several hot dogs, a fountain drink, and a bottle of Coca-

Cola. The suspects were last seen driving southbound on SW 40th Avenue in an older model, dark blue Toyota Tacoma, without a license plate. A BOLO (Be On the Look Out) alert was issued for the vehicle. The total value of the stolen property is estimated at $70.00.

- **Case #22-2412-20543**
  Incident: **Grand Theft Auto**
  Location: 3020 SW 30th Avenue
  Details: Officers were dispatched to 3020 SW 30th Avenue in response to a report of a red 1998 Toyota Tacoma stolen from North Miami. It was noted that the vehicle had been parked in the same location and stationery for a minimum of 10 days prior to the report. The truck was removed from the FCIC/NCIC databases after the investigation. Subsequently, the vehicle was towed by Mac's Towing service for safekeeping and the appropriate jurisdiction was notified by teletype.

December 4, 2024

- **Case #22-2412-020628**
  Incident: **AOA FHP**
  Location: I-95 South of Hallandale Beach Blvd.
  Details: Units responded to the initial reporting of a Miami-Dade motorcycle unit involved in a crash with injuries on northbound I 95 south of Hallandale Beach Blvd. It was determined that a civilian motorcyclist sustained minor injuries. Units assisted with traffic control until the case was TOT FHP.
- **Case #22-2412-020631**
  Incident: **Baker Act**
  Location: 4800 block of SW 41st St
  Details: Units responded to the 4800 block of SW 41st St regarding a patient who has a history of paranoia and hallucinations. The patient called 911 twice today and, based on the totality of the circumstances, was found to meet the criteria for the Baker Act.
- **Case #22-2412-020633**
  Incident: **Trespassing**
  Location: 3996 Pembroke Road (Race Trac)
  Details: Units arrested a subject at the RaceTrac at 3996 Pembroke Road who had trespassed before. The subject began to kick and strike the interior of the vehicle after being detained. Drug paraphernalia was later discovered in his possession.
- **Case #22-2412-020645**
  Incident: **Suspicious Incident**
  Location: Missouri
  Details: A complainant out of Missouri reported what she believed to be a b/m who wanted to sell a baby online. CID assisted, and the complainant was referred to her local state police for an initial complaint.

December 5, 2024

- **Case #22-2411-020671**
  Incident: **Stolen Car Recovery**
  Location: 2550 S Park Road (All Ways Towing)
  Details: Units were dispatched regarding a recovered stolen vehicle. The vehicle (2007 Toyota Corolla, FL, tag KSEX66) was towed from 4501 SW 54th Street in Hollywood. Further investigation revealed that it was stolen out of District 2 in Dania Beach and held for processing BSO# 02-2412-000455. Officers coordinated with the teletype (Operator Davis) to change the stolen status to recovered. The vehicle appeared in good condition, with no apparent damage observed.
- **Case #2412-020688**
  Incident: **Police Assist**
  Location: Wawa
  Details: Contact was made with the manager for Wawa regarding a trespass affidavit being kept on file. The manager requested that one be completed so that all Pembroke Park Police Officers can remove individuals from this property. The affidavit was completed, and the report was written (affidavit attached in Tracs). Information was passed along to the day shift so that a blank sign could be obtained and provided to the store, with the listed case number written on the sign.

December 7, 2024

- **Case #22-2412-020768**
  Incident: **Traffic Crash / Warrant Arrest**
  Location: 3301 West Hallandale Beach Blvd.
  Details: Officers responded to 3301 W Hallandale Beach Boulevard about a traffic crash. During the investigation, they discovered that the driver who caused the crash had a warrant for driving while his license was suspended. The warrant was confirmed, and the driver was placed under arrest. He was later transported to the Broward County Main Jail for processing.
- **Case # 22-2412-020794**
  Incident: **Petit Theft**
  Location: 3996 Pembroke Road (Race Trac)
  Details: At 0117hrs, Officers responded to 3996 Pembroke Road (Race Trac) in reference to a theft that just occurred. Upon arrival, we made contact with W/F Priscilla Blanco. Management advised that she entered and exited the store, taking two 12-packs of Modelo Beer and passing all points of sale. The beer totaled $37.42. She was taken into custody without incident and transported to BSO Main Jail for processing.

December 8, 2024

- **Case #22-2412-020811**
  Incident: **Missing Person**
  Location: 5590 W. Hallandale Beach Blvd (The Polo Club)

Details: At 1855hrs, Officers responded to 5590 W. Hallandale Beach Blvd (The Polo Club) about a missing person report. The caller advised that her uncle, B/M Derrick Sheffield, was last seen on Monday, December 2, 2024, at approximately 1700 hours. Derrick was treated by fire rescue in the parking lot but refused transport. Mr. Sheffield is seen walking southbound on SW 56th Avenue. A short time later, he was observed coming back to retrieve his bike and again was observed heading southbound on SW 56th Avenue. Mr. Sheffield is homeless and is not known to be in any danger. The caller, who is his niece, does not know his whereabouts. Officers called local hospitals and the jail, which all yielded negative results. He was entered into teletype as missing via Margate Dispatch.

December 9, 2024

- **Case #22-2412-020846**
  Incident: **Information**
  Location:2500 Block of SW 32 Ave.
  Details: Units responded in reference to a delayed grand theft. The suspect was suspected to be a former employee with manager status at a company selling large amounts of merchandise. The suspect's MO appears to be channeling valuables to his disguised company. CID took over the case.
- **Case #2412-020865**
  Incident: **Domestic Disturbance**
  Location: 5453 SW 34 Street
  Details: Officers responded in reference to a domestic disturbance. Upon arrival, officers made contact with the victim (B/M), who stated that he was having a verbal altercation with his live-in girlfriend (H/F suspect) about finances. The victim stated that they separated and were sleeping in separate rooms when the suspect entered his room and struck him in the face with a closed fist. The victim sustained a minor laceration to the right side of his nose/cheek area; however, he refused medical assistance. The suspect was arrested and transported to BSO Jail. The suspect's 8-year-old juvenile was sleeping next door to the incident; however, they did not witness the altercation. The victim's mother responded and took custody of the 8-year-old juvenile.

December 10, 2024

- **Case # 22-2412-020876**
  Incident: **AOA Stolen Car Recoveryx3**
  Location: 3615 SW 52nd Ave
  Details: Patrol officers responded to 3615 SW 52nd Ave regarding what initially was reported as one abandoned vehicle but later developed into three stolen car recoveries. No investigative leads were developed, and all vehicles were stolen from our jurisdiction listed as follows: 1. Red Infinity stolen from the City of Pembroke Pines 2. Gray Dodge Charger from the City of Pembroke Pines. 3. White Jeep Cherokee stolen from the Town of Davie.
- **Case #22-2412-020881**
  Incident: **Domestic Violence / Baker Act**
  Location: 2324 Charles Road

Details: Patrol officers responded regarding an alleged aggravated assault. After further investigation, it was determined that the reporting party was heavily drinking and had paranoid behavior, stating that officers were friends with her boyfriend. The reporting party was Baker Acted with a hold for simple battery in a domestic setting.

December 11, 2024

- **Case #22-2412-020921**
  Incident: **Traffic Crash / Vehicle vs. Juvenile Pedestrian**
  Location: 3550 SW 48th Avenue – Lake Forest ES
  Details: While the Community Service Aide was working in the school zone at 3550 SW 48th Avenue (Lake Forest Elementary School), a five-year-old black male darted out into traffic and was struck by a black Mercedes Benz SUV. The juvenile was walking home with his sister who is a black female juvenile age eight years old. The five-year-old darted into traffic to retrieve a toy he dropped in the roadway, and the Mercedes Benz struck him. The five-year-old fell to the ground, stood up, and ran across the roadway to the other side of the street. The five-year-old was autistic and nonverbal. The Broward Sheriff's Office Rescue EMS responded, and the five-year-old was transported to Joe DiMaggio Hospital. There were no visible injuries, but the five-year-old was transported as a precautionary measure. The parent was notified, and he responded to the hospital. The abuse hotline was also notified.

December 12, 2024

- **Case# 22-2412-020972**
  Incident: **Shooting**
  Location: 3996 Pembroke Road RaceTrac Gas Station
  Details: At 1723hrs, Officers responded to 3996 Pembroke Road RaceTrac Gas Station regarding a shooting, and the victim was inside the store. The victim, Rashad Adams, was shot once in the upper right portion of his back. BSO Fire Rescue responded and performed triage. He was transported to Memorial Regional Hospital. At the same time, another call was initiated, and a silver Kia was involved in a shooting that led to that vehicle crashing at the intersection of South Park Road and Pembroke. The driver of that vehicle was also transported to Memorial South Hospital for an injury to his arm. Further investigation revealed that the shooting happened in District on SW 20th Street, a few blocks west of SW 40th Avenue. A white Lexus targeted the silver Kia IS 300. The rear passenger of the Lexus produced a firearm and began shooting at the Kia, which resulted in the Kia fleeing the scene until it lost visual of the Lexus. During the incident, the victim was struck by a projectile (bullet); a witness observed his injuries and was able to place the victim on the hood of her vehicle and transport him to the Race Trac, where she called 911. Our units assisted with crime scene preservation and responded to the crash, during which time we generated a crash report.

December 13, 2024

- **Case #22-2412-020994**
  Incident: **Theft**
  Location: 3192 West Hallandale Beach Blvd.
  Details: Approximately a month ago, a black female's wallet was missing by an unknown means while she was buying merchandise from a street vendor at 3192 West Hallandale Beach Blvd. Although it is unknown how her wallet appeared missing, an unknown person(s) took illegal possession of her bank card to make unauthorized purchases
- **Case #22-2412-020991**
  Incident: **Grand Theft & Abuse of the elderly**
  Location: Residence
  Details: A victim, who is a black male 83 years old, responded to the police station and reported that he suspects his friend, who is a black male 30 years of age, of stealing his bank card and spending $30,000 at a casino. His suspicions arose after the suspect cared for him for October due to an accident.
- **Case #2412-021025**
  Incident: **Narcotics**
  Location: West Hallandale Beach Blvd.
  Details: Officers observed a 2007 black Mercedes C230 (FL Tag IHY C06) with a smoked-colored tag cover driving at a high rate of speed. The vehicle was observed tailgating another vehicle, less than one vehicle length, then swerving lanes and accelerating to well over 100 mph on W. Hallandale Beach Boulevard. Officers eventually caught up to the vehicle as it slowed for a red light and conducted a traffic stop. A records check revealed that the driver had multiple suspensions on his license and a seize tag order on the vehicle. The driver was asked to exit the vehicle, but he initially refused. Officers maintained physical control of him, escorted him out of the vehicle, and placed him into custody. An inventory search of the vehicle was conducted, and approximately 3 grams of field-tested positive cannabis was located in the center console of the vehicle, in the immediate control of the driver. A further search revealed a 7.62x39mm rifle in the vehicle's trunk. The driver was arrested, and the cannabis and rifle were submitted into Pembroke Park Police Department Evidence lockers. The vehicle was towed to Mac’s Towing.
  Reclassified the case as an information incident and completed a report.
- **Case #22-2412-021037**
  Incident: **Theft**
  Location: 2324 Charles Road
  Details: The patrol division responded to 2324 Charles Road about a theft that occurred on 12/10/2024 after an arrest for domestic battery. The victim in this domestic allegedly moved out and decided to drive back to his home in Boston while his girlfriend was in jail. During this time, he is accused of stealing her Wells Fargo debit card and using it illegally. A report was completed.

December 14, 2024

- **Case #2412-021051**
  Incident: **Baker Act (Juvenile)**
  Location: 3851 SW 52 Avenue #102
  Details: Officers responded in reference to a possible suicide attempt. Upon arrival, officers met with a B/F juvenile (14yoa) who stated that she consumed an entire bottle of Excedrin and wanted to kill herself. She stated that immediately after taking the pills, she did not want to kill herself anymore and began vomiting in the bathroom and called 9-1-1.
- **Case #2412-021071**
  Incident: **AOA FHP**
  Location: 3200 Block of W. Hallandale Beach Blvd.
  Details: Officers received a BOLO for a white Mercedes SUV with a stolen NC tag (KHY 4977) that alerted an LPR east on W. Hallandale Beach Boulevard from Miramar. Officers observed the vehicle in the 3200 block of W. Hallandale Beach Boulevard. The vehicle entered I-95, and officers requested that FHP respond. Officers maintained visual contact with the vehicle until FHP arrived. FHP conducted a felony stop at Fort Lauderdale Airport and took one subject into custody.
- **Case #2412-021064**
  Incident: **Traffic Crash**
  Location: 3400 W. Hallandale Beach Blvd
  Details: Officers responded about a vehicle crash with injuries. Upon arriving, officers determined a B/M juvenile (7yoa) was injured and complaining of abdominal pain. Additionally, his father was complaining of pain in his torso. Fire rescue responded and transported both to the hospital with non-life-threatening injuries. The eastbound lanes of W. Hallandale Beach Blvd were being diverted; however, they have been re-opened. Local media was on the scene.

December 16, 2024

- **Case #22-2412-021096**
  Incident: **Theft of Auto Parts**
  Location: 3740 SW 48 Avenue
  Details: Officers responded to 3740 SW 48th Avenue regarding the theft of four tires and rims from a vehicle. The victim stated that he parked his 2024 black Toyota Corolla, with Florida tag #KN673G, in the parking lot of his apartment complex on December 15, 2024, at 2000 hours. When he returned on December 16, 2024, at 0500 hours, he found his car sitting on bricks, indicating that all four tires and rims had been stolen. The estimated loss is valued at $2,500.00.

- **Case # N/A**
  Incident: **Illegal Gambling Machine**
  Location: Orion Gas Station – 3990 W. Hallandale Beach Blvd.
  Details: After refueling at the Orion Gas Station at 3990 West Hallandale Beach Boulevard, Officer Andrieu entered the store to obtain her gas receipt and observed an illegal gambling machine. There was only one machine located next to an ATM.

December 17, 2024

- **Case #22-2412-021145**
  Incident: **Stolen Tag**
  Location: 5525 SW 41st Street
  Details: Officers responded following a report of a stolen license plate. The victim stated that she parked her gray 2017 four-door Nissan Altima, which had Florida tag #KR556R, in the parking lot of her apartment complex. She discovered that the license plate had been stolen from the back of her vehicle. The stolen tag was entered in the FCIC/NCIC system as stolen.
- **Case #22-2412-021151**
  Incident: **Petit Theft**
  Location: 3996 Pembroke Road – Racetrack
  Details: Officers responded to investigate a petit theft. A Hispanic male dressed entirely in black approached the food counter, prepared some food for himself, and made a drink. The suspect then walked past all points of sale with these items without making a payment. He was last seen riding a black bicycle south on SW 40th Avenue. A search for the suspect was conducted, but it yielded no results. The total value of the stolen items was estimated at $8.00.
- **Case #22-2412-021160**
  Incident: **Grand Theft Auto**
  Location: 2301 SW 32 Avenue
  Details: Officers responded regarding a stolen box truck. The victim reported that he parked his white 2007 Isuzu NQR box truck, with Florida tag #JM7JX, and he noticed it was missing from its last parked location. The truck was not listed in the tow log. The vehicle has been entered into the FCIC/NCIC as stolen.
- **Case #22-2412-021161**
  Incident: **Petit Theft**
  Location: 3996 Pembroke Road – Racetrack
  Details: Officers responded regarding a petit theft. The manager reported that four young black male adults entered the store and walked past all points of sale without paying for their items, which included four hot dogs, fountain drinks, and candies. The suspects then left the scene in a four-door silver Nissan Altima with Florida license plate #AF19VG, but their direction of travel is unknown. The total value of the stolen items was $12.00.

December 18, 2024

- **Case #22-2412-021206**
  Incident: **Fraud**
  Location: 3001 W. Hallandale Beach Blvd. #300
  Details: The patrol division responded to 3001 West Hallandale Beach Blvd #300 about delayed fraud. The complainant is the property manager for Heart Fully Yours Homes LLC, who discovered that one of their clients was a victim of fraud and stated that Check #3635 was fraudulently deposited into an unknown account for $5,000.10 and was made payable to Ashley Segura. The check was cleared on

November 12th, 2024. The time frame of this fraud is unknown at the time. A report was completed.

- **Case #22-2412-021199**
  Incident: **Vehicle Burglary**
  Location: 5525 SW 41 Street – Crosswinds Apts.
  Details: The Patrol Division responded in regards to a delayed vehicle burglary that occurred 12/17/2024 from 1800 to 12/18/2024 0700; the victim advised that unknown person(s) burglarized his 2001 Chevy Van by smashing the passenger side window to gain entry and steal (1) Table Saw, (1) Chipping Hammer, (2) Electric Drills, (4) Hand Drills, (1) Tree Saw and (4) Electric Hammers. The total cost of items taken is $2000.00. The cost of the broken window is estimated to be $250.00. There were no witnesses or related evidence.
- **Case #2412-021248**
  Incident: **AOA FHP**
  Location: 5300 block of SW 25th Court
  Details: A BOLO was received for a stolen vehicle that had just occurred in the driver. The perimeter and Aviation were canceled, and the scene was turned over to FHP (FHP24OM0636668).

December 19, 2024

- **Case # 22-2412-021261**
  Incident: **Fraud**
  Location: 3281 West Hallandale Beach Blvd (First Florida Credit Union)
  Details: The road patrol division responded regarding a delayed fraudulent check. According to the branch manager, the following occurred. A black female in her twenties or early thirties, with the alias of Chaya Santana," opened an account number 0000976695 and deposited a fraudulent check on 12-10-24 for $6,750 via the drive-thru ATM. The unknown suspect withdrew $500 immediately after the deposit and transferred $200 via Chime on the same date, which resulted in a total loss of $700. The check was made payable to Chaya Santana with the issuing company named Riverhead Building Supply, check number 816798. The company is based out of New York State, and no contact has been made with this company as of yet. The identity of Santana was identified as false based on the Florida driver's license on file, FL DL # S837739286970, which is unfounded in the State's teletype system. Florida driver's license numbers indicate the driver's birth year as the 7th and 8th digits. The DL mentioned above has "28" as the birth year 1928. The listed address on file is 830 NE 212 Ter apt 3, Miami, FL 33179. This case is active.
- **Case # 22-2412-021266**
  Incident: **Stolen Car Recovery**
  Location: 2550 S Park Road – All Ways Towing
  Details: The road patrol division responded regarding a stolen 2022 Gray BMW X3 SUV bearing FL temporary tag DSZ2778. At 1237 hours, Driver Luis Guillermo, ID# L-G, driving company truck # 322, towed this vehicle from 6401

Washington Street, Hollywood, FL 33023. Five Star Parking contacted All-Ways Towing to tow the vehicle due to "unauthorized parking." This vehicle was reported stolen by the Fort Lauderdale Police Department and verified through BSO dispatch. Margate operator ID 3356 removed the vehicle from the teletype system.

December 20, 2024

- **Case #22-2412-021303**
  Incident: **Petit Theft**
  Location: 3996 Pembroke Road – Racetrac Gas Station
  Details: Officers responded regarding a petit theft. The manager reported that a black female entered the store and walked past all points of sale without paying for two hot dogs and a bag of potato chips. The female left the scene in a four-door silver Lexus with Florida license plate #AFBI10. The total value of the stolen items was $12.00.
- **Case #22-2412-021347**
  Incident: **Trespass Warning**
  Location: 3101 W. Hallandale Beach Blvd. - 24/7 Liquor Store
  Details: At 0321hrs, Officers responded regarding a B/M harassing customers in front of the business. Contact was made with the B/M Christopher Martin D.O.B 3/28/97, a teletype check that he had no outstanding warrants. As a result, the subject was issued a Trespass Warning and told not to return to the business or be subject to arrest. The subject understood and left the area without incident.

December 21, 2024

- **Case #22-2412-021361**
  Incident: **Police Service Call**
  Location: 3615 SW 52nd Avenue – Park Avenue Apts.
  Details: Officers responded to the Park Apartments. They checked all parked vehicle tags (ELVIS) for stolen vehicles. None of the vehicle tags that were checked returned as stolen.

December 22, 2024

- **Case #22-2412-021390**
  Incident: **Grand Theft**
  Location: 3188 Lakeshore Drive
  Details: Officers responded to 3188 Lakeshore Drive regarding the theft of an electric bike. The victim reported securing his black electric bike, valued at $2,000, on the back of his mobile home on Friday, December 20, 2024, around 4:00 PM. However, when he returned on December 21, 2024, at approximately 9:00 AM, he discovered his bike was missing. The victim did not remember his electric bike's make/model or serial number.

December 23, 2024

- **Case #22-2412-021441**
  Incident: **Petit Theft**
  Location: 3240 West Hallandale Beach Blvd.
  Details: Officers responded to Action Air, located at 3240 West Hallandale Beach Boulevard, regarding a stolen license plate. The victim reported last seeing the license plate on her 2016 Nissan Cargo van, which bears the Florida tag number #AT14GU. She noticed that the license plate was missing. The van had been parked on the north side of the business, with the rear-facing the west-side fence. The stolen tag has been entered into the FCIC/NCIC system.
- **Case #22-2412-021450**
  Incident: **Grand Theft**
  Location: 2400 Commerce Center Way - JEG & Sons
  Details: Officers responded to 2400 Commerce Center Way (JEG & Sons). The Chief Operations Manager of JEG & Sons reported that on October 28, 2024, at 1223 hours, a black male arrived at the business to pick up packages for FedEx. This individual seemed knowledgeable about the company's operations. He claimed he was there to collect FedEx packages and wore a black mask and FedEx company clothing. The male was given 357 packages and used a cellular phone to simulate the scanning process. He loaded the packages into a U-Haul truck that he was driving. After observing the real FedEx truck approaching, the male left the business, driving northbound on Commerce Center Way. The packages contained cellular phones from different carriers, and the property loss was valued at $75,363.09.

December 24, 2024

- **Case #22-2412-021477**
  Incident: **Hit & Run**
  Location: Hallandale Beach Blvd and SW 40th Ave
  Details: At 0514 hours, the road patrol division responded to a hit-and-run. The suspect appears injured and is believed to live in West Park. His phone and DNA were recovered from the scene and placed into evidence, awaiting a photo lineup; however, the victim appears to have no further interest in cooperating.
- **Case #22-2412-021480**
  Incident: **Vehicle Burglary**
  Location: 5525 41st Street
  Details: At 0744 hours, the road patrol division responded to a delayed vehicle burglary at 5525 41st Street. The unknown suspects smashed the rear window of a work van, stealing multiple tools, including two electric Ryobi hammer drills. The vehicle interior was processed for latent with negative results. No witnesses

- **Case #22-2412-021490**
  Incident: Stolen Car
  Location: 2300 S. Park Road
  Details: At 1222 hours, the road patrol division responded to a grand theft auto at 2300 S Park Road that occurred between yesterday at 12pm and today at 1222pm. The vehicle was later recovered today in Miami and removed out the system by Miami. No suspects were arrested.

December 25, 2024

- **Case #22-2412-021527**
  Incident: **Burglary Conveyance**
  Location: 3031 W. Hallandale Bch. Blvd. - Racetrac
  Details: The victim parked her vehicle at the gas pump. While pumping gas, an unknown B/M entered the victim's vehicle through the passenger door and removed a wallet from the passenger front seat. The victim advised that she was unaware of the B/M entering the car or leaving the area. However, video surveillance was available.

December 26, 2024

- **Case # 22-2412-021590**
  Incident: **Stolen Vehicle**
  Location: 3215 SW 52nd Avenue # 93
  Details: The victim said he heard the alarm on his Red 2017 Chrysler 300 Tag # S21021 sound off. Once outside, he saw the vehicle driving off with an unknown black or blue sedan exiting the complex. The vehicle fled in an unknown direction. The tow log was checked, and the vehicle was not towed. The victim advised the vehicle to be paid off free and clear. There was no video surveillance available. The vehicle was entered into teletype as stolen via the Margate Police Department. 24PK82

December 27, 2024

- **Case # 22-2412-021593**
  Incident: **Vehicle Burglary**
  Location: 2301 SW 32 Avenue
  Details: The driver emptied cash from several vending machines the day before, totaling 19 pouches filled with coins (quarters and pennies) from the vending machines. The driver attempted to store the money inside the business yesterday, but he was locked out, and no one with manager rights appeared to be working. For these reasons, he left the money locked in the rear cargo area of the company box truck. Today at 0500 hours, the driver discovered that his assigned company truck's rear lock leading to the cargo area was broken, and all the money pouches were missing, totaling approximately $236.00. The bags containing the money are marked with the serial numbers for all the bags. The truck was parked north of the business, with no surveillance cameras nearby, except for those located on the west side at unit 301 (Amazon). The driver believes one of his coworkers stole the money.

- **Case #22-2412-021606**
  Incident: **Theft**
  Location: Hallandale Beach Blvd. - just west of Racetrac
  Details: Units responded to a vehicle accident with no injuries just west of the Racetrac. At the same time, a delayed theft was reported at the Ractrac. The suspect appeared homeless and left the area on a bicycle after stealing sandwiches.
- **Case #2412-021627**
  Incident: **AOA FHP**
  Location: I-5 Southbound just North of Hallandale Bch. Blvd.
  Details: Officers responded to I-95 southbound just north of W. Hallandale Beach Boulevard regarding a suspect who had shot into an occupied vehicle on I-95. Upon arrival, officers just stood by with FHP if they needed assistance with the investigation. After the initial investigation, Sgt. Dodge transported a b/m juvenile from the scene to a location in Hollywood so that he was not in harm's way on the side of the highway. Our officers were no longer needed and left the area.

December 28, 2024

- **Case # 2412-021660**
  Incident: **Trespassing After Warning**
  Location: 4790 W. Hallandale Beach Blvd. - Dollar General
  Details: Officers responded in reference to an individual who had previously trespassed from this property and kept returning. Upon arrival, officers observed the subject on the property and took him into custody for trespassing after warning. The subject was TOT BSO Jail.
- **Case #2412-021672**
  Incident: **Auto Theft**
  Location: 5990 W. Hallandale Beach Blvd. - Polo Club
  Details: Officers responded in reference to an auto theft that had just occurred. Upon arrival, the victim reported dropping his key fob to his 2014 Kia Forte (FLA Tag PTF V40) inside the club. He went outside to check on his vehicle and observed a H/M with a blue shirt and black pants in the driver's seat. He attempted to open the vehicle, and the suspect drove off in the victim’s vehicle and fled east on W. Hallandale Beach Blvd. The victim stated that he would be able to recognize the suspect if he saw him again and advised that he wished to prosecute. The vehicle was entered into teletype. Officers spoke with management and reviewed the club's surveillance footage, allowing them to view footage of the suspect. It was discovered that the suspect had just performed at the club. However, the only information we could obtain about his identity was his stage name, “Lilpapoo.” Officers are awaiting further information for follow-up.

December 29, 2024

- **Case #22-2412-021687**
  Incident: **Criminal Mischief**
  Location: 3199 W. Hallandale Beach Blvd. - WAWA

Details: The road patrol division responded regarding a road rage incident. The victim advised that he got into an altercation while driving with a W/M (suspect). The suspect was driving a White Lexus SUV with an unknown tag. The victim stated that as they exited the I-95 ramp onto W. Hallandale Beach Blvd westbound. The suspect pulled alongside his vehicle and threw an unknown object, shattering the front passenger-side window. The suspect then fled eastbound on W. Hallandale Beach Blvd. The victim signed a waiver of prosecution.

- **Case #2412-021699 / 021698**
  Incident: **Hit and Run Crash / Fleeing and Eluding**
  Location: SW 40th Avenue and W. Hallandale Beach Blvd
  Details: While on patrol, officers observed a 2018 blue Kia Soul traveling at a high rate of speed and another vehicle appearing to be following the Kia. Officers observed the Kia fail to stop at a red light at SW 40th Avenue and W. Hallandale Beach Blvd. The Kia then circled through the gas station parking lot and struck the concrete median, causing significant damage to the right side of the Kia and flattening the tires. Officers attempted to conduct a traffic stop on the Kia by activating the lights and sirens of the marked police vehicle. The Kia failed to yield to the police vehicles. The Kia sustained so much damage that the vehicle was soon inoperable and came to a stop in the 4000 block of SW 48th Avenue. Officers took the driver into custody. It was determined that the vehicle had been involved in a hit-and-run crash with injuries and had fled the scene of that crash when officers initially observed the vehicle. The driver was issued 5 citations and arrested for Fleeing and Eluding a law enforcement officer (2412-021698). The driver of the initial crash (2412-021699) was treated on scene and refused to be transported to the hospital.

CALLS FOR SERVICE			
INCIDENT TYPE	**BREAKDOWN**	**Nov 1 - Nov 25**	**Nov 26 - Dec 29**
ACCIDENTS	Hit and Run (3)	**9**	**6**
	Regular (4)	**24**	**33**
	Rollover (4E)	**0**	**0**
	With Injuries (4I)	**4**	**14**
	TOTAL ACCIDENTS	**37**	**53**
ALARM CALLS (49A, 49H, 49S)	**TOTAL ALARM CALLS**	**29**	**71**
BURGLARY	Attempt (21A)	**1**	**1**
	Commercial (21C)	**0**	**0**
	Residential (21R)	**1**	**0**
	Vehicle (21V)	**3**	**11**
	TOTAL BURGLARIES	**5**	**12**
GENERAL INCIDENTS			
MISSING PERSON (8)		**1**	**1**
STOLEN TAG (9)		**0**	**4**
STOLEN VEHICLE (10)		**3**	**7**
STOLEN VEHICLE RECOVERED (10R)		**3**	**7**
INFORMATION (14)		**53**	**67**
LARCENY (30)		**14**	**18**
DOMESTIC VIOLENCE (38)		**2**	**5**
VANDALISM (40)		**1**	**1**
PARKING COMPLAINTS (73)		**44**	**61**
	TOTAL GENERAL INCIDENTS	**121**	**171**
	DISPOSITIONS:		
	A - Written Report	**2**	**7**
POLICE SERVICE CALLS (68)	B - No Written Report	**504**	**708**
	C - Contact Made with Owner (Alarm)	**1**	**0**
	E - Civil Assist	**6**	**7**
	68P*	0	2
	TOTAL POLICE SERVICE CALLS	**513**	**724**
TRAFFIC STOP (10-50)		**26**	**33**
ARRESTS	Felony	**6**	**4**
	Misdemeanor	**3**	**12**
	TOTAL ARRESTS	**9**	**16**
CITATIONS		**25**	**52**
WARNINGS		**11**	**13**
	TOTAL CITATIONS	**36**	**65**
REPORTS	FIBRS REPORTS	98	142
	CRASH REPORTS	35	50
	TOTAL REPORTS	**133**	**192**

Total Calls for Service :
Nov 1st - Nov 25th = 967
Nov 26th - Dec 29th = 1427

Agenda Item Report

Subject:	Fiber for the Police Department
Meeting Date:	Public Notice for Commission Workshop - Jan 08 2025
Prepared For:	Police Department
Staff Contact:	Mark Pakula, Information Technology Director
Dept/Group:	IT
Recommendation for Counsel to consider:	Approve Item
Background Information:	Under General Comments you will see all the State contract information from Comcast. This purchase (as set forth in this Comcast Enterprise Services Sales Order Form No. FI-4736723-dkeen-27505238 ("SOF") is placed against General Services Administration Agreement GS-35F-184BA ("GSA"), located at the following or successor URL: https://www.gsaadvantage.gov/advantage/ws/catalog/contractor_detail?mapName=%2Fs%2Fsearch%2F&contractNumber=GS-35F-184BA.
Staff Recommendations:	Approve Item
Financial Implications:	This is for a 500 Mbps Circuit for 725.00 monthly for thirty-six months.
Alternatives:	

ATTACHMENTS:

Town of Pembroke Park PD - GSA-MAS IT Sales Order 112524 hlted

Finance director, Finance & Budget Director

Status:
Pending

Jacobs Horowitz, Town Attorney	None
Chandler Williamson, Town Manager	None
David Lynch, Town Manager	None
Cynthia Garcia-Lima, Town Clerk	None

COMCAST BUSINESS

COMCAST ENTERPRISE SERVICES SALES ORDER FORM

MSA ID#: FI-4736723-dkeen **SO ID#:** FI-4736723-dkeen-27505238 **Account Name:** TOWN OF PEMBROKE PARK PD

CUSTOMER INFORMATION (for notices)

Primary Contact:	Mark Pakula
Title:	
Address 1:	3150 SW 52nd Ave
Address 2:	
City:	Pembroke Park
State:	FL
Zip:	33023
Phone:	9547014345
Cell:	
Fax:	
Email:	mpakula@tppfl.gov

Billing Account Name	TOWN OF PEMBROKE PARK PD
Billing Name (3rd Party Accounts)	
Billing Contact:	David Lynch
Title:	
Phone:	954-966-4600
Cell:	
Fax:	
Email:	dlynch@tppfl.gov

INVOICE ADDRESS

Address 1:	3150 SW 52nd Ave
Address 2:	
City:	Pembroke Park
State:	FL
Zip Code:	33023
Tax Exempt:	Yes

* If Yes, please provide and attach all applicable tax exemption certificates

SUMMARY OF CHARGES (Details on following pages)

Service Term (Months): **36**

SUMMARY OF SERVICE CHARGES*

Current Monthly Recurring Charges:	$0.00
Current Trunk Services Monthly Recurring Charges:	$0.00
Total Current Monthly Recurring Charges (all Services):	**$0.00**
Change Monthly Recurring Charges:	$725.00
Change Trunk Services Monthly Recurring Charges:	$0.00
Change Monthly Recurring Charges (all Services):	**$725.00**
Total Monthly Recurring Charges:	$725.00
Total Trunk Services Monthly Recurring Charges:	$0.00
Total Monthly Recurring Charges (all Services):	**$725.00**

SUMMARY OF STANDARD INSTALLATION FEES*

Total Standard Installation Fees:	$0.00
Total Trunk Services Standard Installation Fees:	$0.00
Total Standard Installation Fees (all Services):	**$0.00**

SUMMARY OF CUSTOM INSTALLATION FEES*

Total Custom Installation Fee:	**$0.00**

SUMMARY OF MONTHLY EQUIPMENT FEES*

Current Services Equipment Fee Monthly Recurring Charges:	$0.00
Current Trunk Services Equipment Fee Monthly Recurring Charges:	$0.00
Current Equipment Fee Monthly Recurring Charges (All Services):	**$0.00**
Change Services Equipment Fee Monthly Recurring Charges:	$0.00
Change Trunk Services Equipment Fee Monthly Recurring Charges:	$0.00
Change Equipment Fee Monthly Recurring Charges (All Services):	**$0.00**
Total Service Equipment Fee Monthly Recurring Charges	**$0.00**
Total Trunk Service Equipment Fee Monthly Recurring Charges	**$0.00**
Total Equipment Fee Monthly Recurring Charges (All Services)	**$0.00**

*Note: Charges identified in the Sales Order are exclusive of maintenance and repair charges, and applicable federal, state, and local taxes, fees, surcharges and recoupments (however designated). Please refer to your Comcast Enterprise Services Master Services Agreement (MSA) for specific detail regarding such charges. Customer shall pay Comcast one hundred percent (100%) of the non-amortized Custom Installation Fees prior to the installation of Service. The existence of Hazardous Materials at the Service Location or a change in installation due to an Engineering Review may result in changes to the Custom and/or Standard Installation Fees payable by Customer.

GENERAL COMMENTS

This purchase (as set forth in this Comcast Enterprise Services Sales Order Form No. FI-4736723-dkeen-27505238 ("SOF") is placed against General Services Administration Agreement GS-35F-184BA ("GSA"), located at the following or successor URL: https://www.gsaadvantage.gov/advantage/ws/catalog/contractor_detail?mapName=%2Fs%2Fsearch%2F&contractNumber=GS-35F-184BA. The Contract Terms and Conditions ("T's and C's") contained in the GSA apply to this purchase and take precedence over all other conflicting T's and C's, express or implied. Upon the expiration of the Service Term applicable to the SOF, the Service Term shall automatically renew for successive periods of one (1) month each (each, a "Renewal Term"), unless prior written notice of non-renewal is delivered by either party to the other at least thirty (30) days before the expiration of the Service Term or the then current Renewal Term. Customer acknowledges and agrees that if Customer terminates the Service(s) identified in this SOF prior to the expiration of the Service Term, Customer shall be responsible for the payment of any and all unpaid charges for Services rendered and for Comcast equipment, and, any and all unpaid capital expenses incurred by Comcast with respect to delivery of the Service(s), all of which are to be paid by Customer to Company within thirty (30) days of the invoice date; provided, that, the amount of capital expenses owed by Customer shall be reduced by the total amount of NRC and MRC already paid to Comcast by Customer for the applicable Service(s) at the time of termination.

AGREEMENT

This Comcast Enterprise Services Sales Order Form ("Sales Order") shall be effective upon acceptance by Comcast. This Sales Order is made a part of the Comcast Enterprise Services Master Services Agreement, entered between Comcast and the undersigned and is subject to the Product Specific Attachment for the Service(s) ordered herein, located at http://business.comcast.com/terms-conditions-ent, (the "Agreement") . Unless otherwise indicated herein, capitalized words shall have the same meaning as in the Agreement.

By purchasing Comcast voice services, you are giving Comcast Business permission to request a copy of the Customer Service Record(s) from your existing carrier(s). Customer Service Records include the telephone numbers listed on the account(s) and may also include information related to services provided by such carrier(s).

COMPANY ACKNOWLEDGES RECEIPT AND UNDERSTANDING OF THIS 911 NOTICE:

Your Comcast Business Voice Services set forth in this Sales Order (the "Voice Services") have the following 911 limitations:

- In order for 911 calls to be properly directed to emergency services using the Voice Services, Customer must provide and maintain the correct service address information ("Registered Service Location") for each telephone number and extension used by Customer. The Registered Service Location should also include information such as floor and office number as appropriate.
- If the Voice Services are moved to, or used in, a different location without Customer providing an updated Registered Service Location, 911 calls may be directed to the wrong emergency authority, may transmit the wrong address, and/or the Voice Services (including 911) may fail altogether. Customer's use of a telephone number not associated with its geographic location, or a failure to allot sufficient time for a Registered Service Location change to be processed, may increase these risks.
- Customer is solely responsible for programming its telephone system to map each telephone number and extension to the correct location, and for updating the telephone system as necessary to reflect moves or additions of stations.
- Customer 911 calls may be sent to an emergency call center where an agent will ask for the caller's name, telephone number, and location, and then will contact the local emergency authority.
- The Voice Services use electrical power in the Customer's premises. If there is an electrical power outage, 911 calling may be interrupted if back-up power is not installed, fails, or is exhausted. Voice Services that rely on a broadband connection may also be interrupted if the broadband service fails.
- Calls using the Voice Services, including calls to 911, may not be completed if there is a problem with network facilities, including network congestion, network equipment and/or power failure, a broadband connection failure, or another technical problem.
- Failure by Customer to make updates to the Registered Service Location, including updates to restore service address to the original Registered Service Location, or failure to allot sufficient time for the Service Location update provisioning to complete may result in emergency services being dispatched to the incorrect Service Location.
- Customers should call Comcast at 800-741-4141 if they have any questions or need to update the Registered Service Location in the E911 system.

BY SIGNING BELOW, CUSTOMER ACKNOWLEDGES THAT IT HAS READ AND UNDERSTANDS THE FOREGOING 911 NOTICE AND THE 911 LIMITATIONS OF THE VOICE SERVICES.

By signing below, Customer acknowledges, agrees to and accepts the terms and conditions of this Sales Order.

CUSTOMER USE ONLY (by authorized representative)	COMCAST USE ONLY (by authorized representative)		
Signature:	Signature:	Sales Rep:	David Menditto
Name:	Name:	Sales Rep E-Mail:	david_menditto@comcast.com
Title:	Title:	Region:	Florida
Date:	Date:	Division:	Central

COMCAST BUSINESS

COMCAST ENTERPRISE SERVICES SALES ORDER FORM

SERVICES AND PRICING

Account Name: TOWN OF PEMBROKE PARK PD **Date:** 11/25/2024

MSA ID#: FI-4736723-dkeen **SO ID#:** FI-4736723-dkeen-27505238

Short Description of Service: Police Dept 500 EDI

Service Term: 36 MONTHS

Solution Charges

Line	Request	Action	Service(s)	Description	Service Location A*	Service Location Z*	Tax Jurisdiction	Qty	Monthly	One-Time
001	New	Add	EDI - Network Interface - Gig E	Port	Police Dept / PP / 3150 SW 52nd A	-	Interstate	1	$0.00	$0.00
002	New	Add	EDI - Bandwidth	500 Mbps	Police Dept / PP / 3150 SW 52nd A	-	Interstate	1	$725.00	$0.00
003	-	-	-		-	-			$0.00	$0.00
004	-	-	-		-	-			$0.00	$0.00
005	-	-	-		-	-			$0.00	$0.00
006	-	-	-		-	-			$0.00	$0.00
007	-	-	-		-	-			$0.00	$0.00
008	-	-	-		-	-			$0.00	$0.00
009	-	-	-		-	-			$0.00	$0.00
010	-	-	-		-	-			$0.00	$0.00
011	-	-	-		-	-			$0.00	$0.00
012	-	-	-		-	-			$0.00	$0.00
013	-	-	-		-	-			$0.00	$0.00
014	-	-	-		-	-			$0.00	$0.00
015	-	-	-		-	-			$0.00	$0.00
016	-	-	-		-	-			$0.00	$0.00
017	-	-	-		-	-			$0.00	$0.00
018	-	-	-		-	-			$0.00	$0.00
019	-	-	-		-	-			$0.00	$0.00
020	-	-	-		-	-			$0.00	$0.00
021	-	-	-		-	-			$0.00	$0.00
022	-	-	-		-	-			$0.00	$0.00
023	-	-	-		-	-			$0.00	$0.00
024	-	-	-		-	-			$0.00	$0.00
025	-	-	-		-	-			$0.00	$0.00
026	-	-	-		-	-			$0.00	$0.00
027	-	-	-		-	-			$0.00	$0.00
028	-	-	-		-	-			$0.00	$0.00
029	-	-	-		-	-			$0.00	$0.00
030	-	-	-		-	-			$0.00	$0.00
031	-	-	-		-	-			$0.00	$0.00
032	-	-	-		-	-			$0.00	$0.00
033	-	-	-		-	-			$0.00	$0.00
034	-	-	-		-	-			$0.00	$0.00
035	-	-	-		-	-			$0.00	$0.00
036	-	-	-		-	-			$0.00	$0.00
037	-	-	-		-	-			$0.00	$0.00
038	-	-	-		-	-			$0.00	$0.00
039	-	-	-		-	-			$0.00	$0.00
040	-	-	-		-	-			$0.00	$0.00
041	-	-	-		-	-			$0.00	$0.00
042	-	-	-		-	-			$0.00	$0.00
043	-	-	-		-	-			$0.00	$0.00
044	-	-	-		-	-			$0.00	$0.00
045	-	-	-		-	-			$0.00	$0.00
046	-	-	-		-	-			$0.00	$0.00
047	-	-	-		-	-			$0.00	$0.00
048	-	-	-		-	-			$0.00	$0.00
049	-	-	-		-	-			$0.00	$0.00
050	-	-	-		-	-			$0.00	$0.00

* Services Location Details attached Charges are Exclusive of Equipment Fees

PAGE 2 SUBTOTAL: $725.00 $0.00

COMCAST BUSINESS

COMCAST ENTERPRISE SERVICES SALES ORDER FORM

SERVICE LOCATION DETAIL INFORMATION

Date: 11/25/2024 **MSA ID#:** FI-4736723-dkeen **SO ID#:** FI-4736723-dkeen-27505238 **Account Name:** TOWN OF PEMBROKE PARK PD

Line	Location Name/Site ID	Address 1	Address 2	City	State	Zip Code	Incremental Equipment Fee	Technical/Local Contact Name	Technical/Local Contact Phone #	Technical/Local Contact Email Address	Technical Contact On Site (Yes/No)
1	Police Dept / PP	3150 SW 52nd Ave		Pembroke Park	FL	33023	$0.00	Mark Pakula	(954) 701-4345	mpakula@townofpembrokepark.co	Yes
2	-										
3	-										
4	-										
5	-										
6	-										
7	-										
8	-										
9	-										
10	-										
11	-										
12	-										
13	-										
14	-										
15	-										
16	-										
17	-										
18	-										
19	-										
20	-										
21	-										
22	-										
23	-										
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31	-										
32	-										
33	-										
34	-										
35	-										
36	-										
37	-										

Agenda Item Report

Subject:	Ordinance Amending Section 2-125 - Town Attorney Horowitz
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Jacobs Horowitz, Town Attorney
Dept/Group:	
Recommendation for Counsel to consider:	
Background Information:	As directed by the commission, this item amends the process to waive competitive bidding requirements and provides for a waiver by motion rather than by resolution.
Staff Recommendations:	
Financial Implications:	There is no financial impact.
Alternatives:	

ATTACHMENTS:

Ord 2025-XXX (Amending Section 2-125)

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA, AMENDING CHAPTER 2, ARTICLE V OF THE TOWN'S CODE OF ORDINANCES, ENTITLED "PROCUREMENT;" BY SPECIFICALLY AMEDNING SECTION 2-125 OF THE TOWN CODE, ENTITLED "APPLICATION AND EXCLUSIONS;" PROVIDING FOR AN AMENDED PROCESS TO WAIVE CERTAIN COMPETITIVE BIDDING REQUIREMENTS; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN CODE; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Town of Pembroke Park ("Town") wishes to provide for a practical and efficient procurement system; and

WHEREAS, the Town Commission of the Town of Pembroke Park ("Town Commission") desires to amend exclusions to its procurement code under Section 2-125(d)(17) of the Town's Code of Ordinances, related to the waiver of procurement procedures; and

WHEREAS, the Town Commission has determined that amending Section 2-125(d)(17) of the Town's Code of Ordinances is in the best interest of the Town and its residents.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, AS FOLLOWS:

Section 1. Adoption of Representations. The foregoing "whereas" clauses are hereby ratified and confirmed as being true and the same are hereby made a specific part of this Ordinance.

Section 2. Intent and Purpose. The purpose of this Ordinance is to address the need for practical and efficient exclusions to the Town's Procurement Code set forth in Article V of the Town's Code. The Town Commission has determined that such regulations can help ensure the health, safety, and welfare of the Town's residents.

Section 3. Section 2-125(d)(17) of the Town's Code of Ordinances is amended as follows:

Section 2-125. Application and exclusions.

***

(d) Exclusions. The mandatory commission approval amount and the competitive solicitation and selection processes set forth in this article shall not apply to the following:

***

(17) Purchases of goods or services for which the provisions of this article are waived by the Town Commission by ~~resolution~~ motion, upon a public finding by City Commission that such a waiver is in the best interests of the Town.

Section 4. Conflicts. All ordinances or Code provisions in conflict herewith are hereby repealed.

Section 5. Severability. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this Ordinance.

Section 6. Inclusion in Code. It is the intention of the Town Commission of the Town of Pembroke Park that the provisions of this Ordinance shall at some time in the future become and be made a part of the Code of Ordinances of the Town of Pembroke Park and that the sections of this Ordinance may be renumbered or re-lettered and the word "Ordinance" may be changed to "Chapter," "Section," "Article" or such other appropriate word or phrase, the use of which shall accomplish the intentions herein expressed; provided, however, that Section 1 hereof or the provisions contemplated thereby shall not be codified.

Section 7. Effective Date. This Ordinance shall become effective upon passage and adoption.

THE REST OF THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK.

PASSED AND ADOPTED BY THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, ON THE FIRST READING, THIS ___ DAY OF _____, 2025.

PASSED ADOPTED BY THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, ON THE SECOND AND FINAL READING, THIS ___ DAY OF _____, 2025.

ATTEST:

_____
MAYOR ASHIRA MOHAMMED

_____

Town Clerk

Approved as to form and legal sufficiency:

_____
Jacob G. Horowitz
Town Attorney

	VOTE
ASHIRA MOHAMMED	_____
GEOFFREY JACOBS	_____
MUSFIKA KASHEM	_____
WILLIAM R. HODGKINS	_____
ERIK MORRISSETTE	_____

Agenda Item Report

Subject:	Authorization to Award a Contract for the Purchase and Installation of GeoSCADA Electronic Monitoring System Project
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Stanley Merantus, Public Services Director
Dept/Group:	Public Works
Recommendation for Counsel to consider:	It is recommended that the Town Commission authorize the Town Manager to enter into a contract with AWC, Inc. ("AWC"), the sole-source commodity and service, for the purchase and installation of GeoSCADA Electronic Monitoring Systems in an amount of six hundred and four thousand two hundred thirty six dollars and 60/100 ($604,236.60).
Background Information:	The Town currently has the GeoSCADA Electronic Monitoring System in place at two locations and plans to install 28 more systems across the Town. This expansion will enhance maintenance operations, improve station reliability, mitigate the risks of pump failures, and reduce costs associated with daily monitoring, which can be performed remotely.
Staff Recommendations:	It is recommended that the Town Commission authorize the Town Manager to enter into a contract in an amount of $604,236.60, with AWC, for the GeoSCADA Electronic Monitoring System Project.
Financial Implications:	This project will be funded by the Florida Department of Environmental Protection grant, and Stormwater Funds.
Alternatives:	

ATTACHMENTS:

Mission Telemetry System Sole-Source Memo

PROFESSIONAL SERVICES AGREEMENT

THIS IS AN AGREEMENT ("Agreement"), dated this 15th day of January 2025, by and between:

> **TOWN OF PEMBROKE PARK**, **FLORIDA**, a municipal corporation organized and operating pursuant to the laws of the State of Florida, with a business address of 3150 S.W. 52nd Avenue, Pembroke Park, Florida 33023, hereinafter referred to as "Town";
>
> and
>
> **AWC OF LOUISIANA, INC.**, a foreign profit corporation, with a principal address of 6655 Exchequer Drive, Baton Rouge, LA 70809, hereinafter "Contractor," who is authorized to do business in the State of Florida.

Town and Contractor may each be referred to herein as "party" or collectively as "parties."

W I T N E S S E T H:

In consideration of the mutual terms and conditions, promises, covenants and payments hereinafter set forth, Town and Contractor agree as follows:

ARTICLE 1
PREAMBLE

In order to establish the background, context and form of reference for this Agreement and to generally express the objectives, and intentions of the respective parties herein, the following statements, representations and explanations shall be accepted as predicates for the undertakings and commitments included within the provisions which follow and may be relied upon by the parties as essential elements of the mutual considerations upon which this Agreement is based.

1.1 Pursuant to Section III of the Town's Purchasing Policy and Procurement manual, and Sections 2-125(C)(2), and Section 2-129(g)(2) of the Town Code, sole source commodities and services are exempt from the vendor selection process. Attached hereto and incorporated herein as **Exhibit "A,"** is a sole source letter from the Contractor, which complies with application provisions of the Town code.

1.2 On November 27, 2023, the Town entered into a grant agreement ("Grant") with the Florida Department of Environmental Protection (FDEP) for the purchase and installation of the LSPro GeoSCADA Telemetry System, and that agreement is attached hereto an incorporated herein as Exhibit "B" ; and

1.3 Town staff confirmed with FDEP that the quote provided by the Contractor complies with the Grant, and the Town desires to expand the installation of the GeoSCADA Telemetry System to include additional wastewater lifts and pump station.

ARTICLE 2
SERVICES AND RESPONSIBILITIES

2.1 Contractor hereby agrees to perform the services for the installation, configuration, testing, and monitoring of LSPro GeoSCADA Telemetry System from Mission Communications**,** as more particularly described in **Exhibit "C"** attached hereto and by this reference made a part hereof. Contractor agrees to do everything required by the Grant, this Agreement, and Commission award.

2.2 Contractor shall furnish all services, labor, equipment, and materials necessary and as may be required in the performance of this Agreement, except as otherwise specifically provided for herein, and all work performed under this Agreement shall be done in a professional manner. The Contractor's proposal to the Town is attached hereto and incorporated herein as **Composite Exhibit "D."**

2.3 Contractor hereby represents to Town, with full knowledge that Town is relying upon these representations when entering into this Agreement with Contractor, that Contractor has the professional expertise, experience and manpower to perform the services to be provided by Contractor pursuant to the terms of this Agreement and its Exhibits.

2.4 Contractor assumes professional and technical responsibility for performance of its services to be provided hereunder in accordance with recognized professional standards of good engineering practice. If within one year following completion of its services, such services fail to meet the aforesaid standards, and the Town promptly advises Contractor thereof in writing, Contractor agrees to re-perform such deficient services without charge to the Town.

2.5 Contractor shall not utilize the services of any sub-consultant without the prior written approval of Town.

ARTICLE 3
TERM AND TERMINATION

3.1 The term of this Agreement shall commence upon execution and the installation of all equipment set forth in the Exhibits shall be completed within sixty (60) days. All other services, including but not limited to testing, calibration, and monitoring shall commence upon execution of this agreement and continue for a period of three (3) years.

3.2 This Agreement may be terminated by either party for cause, or by the Town for convenience, upon thirty (30) days' written notice by the Town to Contractor, in which event the Contractor shall be paid its compensation for services performed to termination date. [NOTE: Contractor may not terminate existing assignments for convenience after they have been accepted as addendums to this Agreement.] In the event that the Contractor abandons this Agreement or causes it to be terminated,

Contractor shall indemnify the Town against any loss pertaining to this termination up to a maximum of the full contracted fee amount. All finished or unfinished documents, data, studies, plans, surveys, and reports prepared by Contractor shall become the property of Town and shall be delivered by Contractor to Town immediately.

3.4 SCRUTINIZED COMPANIES. Contractor certifies that it and any of its affiliates are not scrutinized companies as identified in Section 287.135, F.S. In addition, Contractor agrees to observe the requirements of Section 287.135, F.S., for applicable sub-agreements entered into for the performance of work under this Agreement. Pursuant to Section 287.135, F.S., the Town may immediately terminate this Agreement for cause if the Contractor, its affiliates, or its subContractors are found to have submitted a false certification; or if the Contractor, its affiliates, or its subContractors are placed on any applicable scrutinized companies list or engaged in prohibited contracting activity during the term of the Agreement. As provided in Subsection 287.135(8), F.S., if federal law ceases to authorize these contracting prohibitions then they shall become inoperative.

ARTICLE 4
COMPENSATION AND METHOD OF PAYMENT

4.1 Contractor shall be entitled to invoice Town in accordance with terms set forth in Exhibit "C." The total compensation for this project shall not exceed **$604,236.60**.

4.2 Town will make its best efforts to pay Contractor within thirty (30) days of receipt of proper invoice the total shown to be due on such invoice.

4.3 All payments shall be governed by the Florida Prompt Payment Act, as set forth in Part VII, Chapter 218, Florida Statutes.

4.4 Payment will be made to Contractor at:

AWC OF LOUISIANA, INC.
6655 Exchequer Drive
Baton Rouge, LA 70809

ARTICLE 5
CHANGES TO SCOPE OF WORK AND ADDITIONAL WORK

5.1 Town or Contractor may request changes that would increase, decrease, or otherwise modify the Scope of Services, as described in **Exhibit "C,"** to be provided under this Agreement as described in Article 2 of this Agreement. These changes will affect the monthly compensation accordingly. Such changes or additional services must be in accordance with the provisions of the Code of Ordinances of the Town, and must be contained in a written amendment, executed by the parties hereto, with the same formality, equality and dignity herewith prior to any deviation from the terms of this Agreement, including the initiation of any additional or extra work.

5.2 In no event will the Contractor be compensated for any work which has not been described in a separate written agreement executed by the parties hereto.

ARTICLE 6
INDEMNIFICATION

6.1 Contractor shall indemnify and save harmless and defend the Town, its trustees, elected and appointed officials, agents, servants and employees from and against any and all claims, demands, or causes of action of whatsoever kind or nature sustained by the Town or any third party arising out of, or by reason of, or resulting from acts, error, omission, or negligent act of Contractor, its agents, servants or employees in the performance under this Agreement, for all costs, losses and expenses, including but not limited to, damages to persons or third party property, judgments and attorneys' fees arising out of or in connection with the performance by Contractor pursuant to this Agreement.

6.2 Contractor shall indemnify Town for all loss, damage, expense or liability including, without limitation, court costs and attorneys' fees that may result by reason of any infringement or claim of infringement of any patent, trademark, copyright, trade secret or other proprietary right due to services furnished pursuant to this Agreement. Contractor will defend and/or settle at its own expense any action brought against the Town to the extent that it is based on a claim that products or services furnished to Town by Contractor pursuant to this Agreement, or if any portion of the services or goods furnished in the performance of the service becomes unusable as a result of any such infringement or claim.

6.3 Contractor's aggregate liability shall not exceed the proceeds of insurance required to be placed pursuant to this Agreement plus the compensation received by Contractor, or extend to any claims brought subsequent to the expiration of warranty period outlined above. The Town's rights and remedies and Contractor's liabilities as set forth in this Agreement, are exclusive, and the Town hereby releases Contractor from all further or subsequent liability, whether based in contract or tort and irrespective of fault, negligence, or strict liability.

6.4 The parties recognize that various provisions of this Agreement, including but not necessarily limited to this Section, provide for indemnification by the Contractor and that Florida Statutes §725.06 requires a specific consideration be given therefor. The parties therefore agree that the sum of **Ten Dollars and 00/100 ($10.00)**, receipt of which is hereby acknowledged, is the specific consideration for such indemnities, and the providing of such indemnities is deemed to be part of the specifications with respect to the services to be provided by Contractor. Furthermore, the parties understand and agree that the covenants and representations relating to this indemnification provision shall serve the term of this Agreement and continue in full force and effect as to the party's responsibility to indemnify.

6.5 The Town is entitled to sovereign immunity as provided by §768.28, F.S., and nothing herein is intended to waive the Town's sovereign immunity.

ARTICLE 7
INSURANCE

Contractor shall comply with all insurance requirements set forth in the Exhibits.

ARTICLE 8
INDEPENDENT CONTRACTOR

8.1 This Agreement does not create an employee/employer relationship between the parties. It is the intent of the parties that the Contractor is an independent Contractor under this Agreement and not the Town's employee for all purposes, including but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the State Workers' Compensation Act, and the State unemployment insurance law. The Contractor shall retain sole and absolute discretion in the judgment of the manner and means of carrying out Contractor activities and responsibilities hereunder provided, further that administrative procedures applicable to Contractor's services rendered under this Agreement shall be those of Contractor, which policies of Contractor shall not conflict with Town, State, H.U.D., or United States policies, rules or regulations relating to the use of Contractor 's Funds provided for herein. The Contractor agrees that it is a separate and independent enterprise from the Town, that it has full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This Agreement shall not be construed as creating any joint employment relationship between the Contractor and the Town and the Town will not be liable for any obligation incurred by Contractor, including but not limited to unpaid minimum wages and/or overtime premiums.

ARTICLE 9
VENUE

9.1 This Agreement shall be governed by the laws of the State of Florida as now and hereafter in force. The venue for actions arising out of this agreement shall be in Broward County, Florida.

ARTICLE 10
PUBLIC RECORDS

10.1 The Town of Pembroke Park is public agency subject to Chapter 119, Florida Statutes. The CONTRACTOR shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

10.1.1 Keep and maintain public records required by the Town to perform the service;

10.1.2 Upon request from the Town's custodian of public records, provide the Town with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in chapter 119, Fla. Stat., or as otherwise provided by law;

10.1.3 Ensure that public records that are exempt or that are confidential and exempt from public record disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and, following completion of the contract, Contractor shall

destroy all copies of such confidential and exempt records remaining in its possession after the Contractor transfers the records in its possession to the Town; and

10.1.4 Upon completion of the contract, Contractor shall transfer to the Town, at no cost to the Town, all public records in Contractor possession. All records stored electronically by the Contractor must be provided to the Town, upon request from the Town custodian of public records, in a format that is compatible with the information technology systems of the Town.

10.2 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement, for which, the Town may terminate the Agreement.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT

TOWN CLERK
9150 SW 52nd Avenue
Pembroke Park, FL 33023
(954) 966-4600
townclerk@tppfl.gov

ARTICLE 11
FEMA REQUIREMENTS

Any reference made to Contractor in this section shall also apply to any SubContractor under the terms of this Contract. Contractor shall be responsible for the compliance by any subContractor or lower tier subContractor with all of these contract clauses:

11.1 Contractor shall assist Town in completing any and all forms necessary for reimbursements from state or federal agencies, including but not limited to FEMA, relating to costs arising out of the services provided pursuant to this Agreement. This may include, but is not limited to, the timely completion and submittal of reimbursement requests, preparation and submittal of any and all necessary cost substantiation and preparing replies to any and all agency denial or inquiries.

11.2 If reimbursement is denied to Town due to Contractor's negligence, including failure to comply with this Article, Contractor upon notification from FEMA or the Florida Division of Emergency Management of such denial and upon written demand by the Town, shall reimburse Town for amounts denied due to Contractor's negligence. This obligation shall survive the term or termination of this Agreement.

11.3 Notwithstanding anything to the contrary set forth herein, Contractor shall comply with the following federally required standard provisions, as set forth in 2 C.F.R. Sec.200.326 and 2 C.F.R. Part 200. In the event of any conflicts, the provisions of this section shall prevail.

11.3.1 Equal Employment Opportunity: During the performance of this contract, Contractor agrees as follows:

(1) Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with Contractor 's legal duty to furnish information.

(4) Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of Contractor 's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of Contractor 's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) Contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subContractor or vendor. Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided,* however, that in the event Contractor becomes involved in, or is threatened with, litigation with a subContractor or vendor as a result of such direction, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

11.3.2 Davis-Bacon Act: Contractor shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor Regulations (29 CFR Part 5). In accordance with the statute, Contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, Contractors must be required to pay wages not less than once a week.

11.3.3 Copeland "Anti-Kickback" Act: Contractor shall comply with the Copeland "Anti-Kickback" Act, (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and SubContractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). Contractor must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. TOWN must report all suspected or reported violations to the Federal awarding agency.

11.3.4 Contract Work Hours and Safety Standards Act. (40 U.S.C. 3701- 3708). Where applicable, pursuant to 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor

regulations (29 CFR Part 5) Contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous.

(1) Overtime requirements. No Contractor or subContractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any subContractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subContractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) Withholding for unpaid wages and liquidated damages. TOWN shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subContractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subContractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) Subcontracts. The Contractor or subContractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subContractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subContractor or lower tier subContractor with the clauses set forth in paragraphs (1) through (4) of this section."

11.3.5 Clean Air Act: Pursuant to 42 U.S.C. 7401- 7671q. and the Federal Water Pollution Control Act (33 U.S.C. 1251- 1387), as amended Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401- 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251- 1387). TOWN will report violations to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
Clean Air Act.

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

(2) The Contractor agrees to report each violation to Town and understands and agrees that the Town will, in turn, report each violation as required to assure notification to the State, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

(3) The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

(1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

(2) The Contractor agrees to report each violation to the TOWN and understands and agrees that the TOWN will, in turn, report each violation as required to assure notification to the State, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

(3) The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA."

11.3.6. Suspension and Debarment. This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the Contractor is required to verify that none of the Contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(1) The Contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. This

certification is a material representation of fact relied upon by TOWN. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to State and TOWN, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

(2) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions."

11.3.7. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended). Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient."

11.3.8 Compliance with State Energy Policy and Conservation Act. Contractor shall comply with all mandatory standards and policies relating to energy efficiency contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163, 89 Stat. 871).

11.3.9 Recovered Materials.

(1) In the performance of this Contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired

(i) Competitively within a timeframe providing for compliance with the contract performance schedule

(ii) Meeting Contract performance requirements; or

(iii) At a reasonable price.

(2) Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, http://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.

11.3.10 Pursuant to 44 CFR 13.36(i)(7), Contractor shall comply with FEMA requirements and regulations pertaining to reporting, including but not limited to those set forth at 44 CFR

40 and 41

11.3.11 Pursuant to 44 CFR 13.36(i)(8), Contractor agrees that if this Agreement results in any copyrightable materials or inventions, in accordance with 44 CFR 13.34, FEMA reserves a royalty-free, nonexclusive and irrevocable license to reproduce, publish or otherwise use the copyright of said materials or inventions for Federal Government purposes

11.3.12 Access to Records. In accordance with 44 CFR 13.36(i)(11) and Chapters 119 and 257, Florida Statutes,

(1) The Contractor agrees to provide the Town, State, FEMA, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the contract for the purposes of making audits, examinations, excerpts and transcriptions.

(2) The Contractor agrees to maintain all books, records, accounts and reports required under the contract for a period of not less than five (5) years after the date of termination or expiration of the contract, except in the event of litigation or settlement of claims arising from the performance of the contract, in which case Contractor agrees to maintain same until the Town, the State, FEMA, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto.

11.3.13 No Obligation by the Federal Government

(1) Absent the express written consent by the Federal Government, the Federal Government or FEMA is not a party to the contract and shall not be subject to any obligations or liabilities to the Town, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FEMA. It is further agreed that the clause shall not be modified, except to identify the subContractor who will be subject to its provisions.

11.3.14 DHS Seal, Logo, and Flags. The Contractor shall not use DHS(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

11.3.15 Compliance with Federal Law, Regulations, and Executive Orders. This is an acknowledgement that FEMA financial assistance will be used to fund the Contract only. The Contractor will comply with all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.

11.3.16 Fraudulent Statements. The Contractor acknowledges that 31 U.S.C. Chap. 38 applies to the Contractor's actions pertaining to this Contract.

11.3.17 Prohibition on Contracting for Covered Telecommunications Equipment or Services
Prohibition on Contracting for Covered Telecommunications Equipment or Services

(a) Definitions. As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause

(b) Prohibitions.

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug.13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, the Contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

(i) Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(ii) Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;

(iii) Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or

(iv) Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(c) Exceptions.

(1) This clause does not prohibit contractors from providing

(i) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) By necessary implication and regulation, the prohibitions also do not apply to:

(i) Covered telecommunications equipment or services that:

i. Are not used as a substantial or essential component of any system; and ii. Are not used as critical technology of any system.

(ii) Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

(i) Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments.

11.3.18 Domestic Preferences for Procurements

As appropriate, and to the extent consistent with law, the Contractor should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States. This includes, but is not limited to iron, aluminum, steel, cement, and other manufactured products.

For purposes of this clause:

Produced in the United States means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

Manufactured products mean items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

ARTICLE 12
MISCELLANEOUS

12.1 **Ownership of Documents.** Reports, surveys, plans, studies and other data provided in

connection with this Agreement are and shall remain the property of Town whether or not the project for which they are made is completed. Town hereby agrees to use Contractor's work product for its intended purposes.

12.2 **Records.** Contractor shall keep such records and accounts and require any and all subContractors to keep records and accounts as may be necessary in order to record complete and correct entries as to personnel hours charged to this engagement, and any expenses for which Contractor expects to be reimbursed. Such books and records will be available at all reasonable times for examination and audit by Town and shall be kept for a period of ten (10) years after the completion of all work to be performed pursuant to this Agreement. Incomplete or incorrect entries in such books and records will be grounds for disallowance by Town of any fees or expenses based upon such entries. All records shall be maintained and available for disclosure, as appropriate, in accordance with Chapter 119, F.S.

12.3 **Assignments; Amendments.** This Agreement, and any interests herein, shall not be assigned, transferred or otherwise encumbered, under any circumstances, by Contractor without the prior written consent of Town. For purposes of this Agreement, any change of ownership of Contractor shall constitute an assignment which requires Town approval. However, this Agreement shall run to the benefit of Town and its successors and assigns.

It is further agreed that no modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

12.4 **No Contingent Fees.** Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for Contractor to solicit or secure this Agreement, and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for Contractor any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. For the breach or violation of this provision, Town shall have the right to terminate the Agreement without liability at its discretion, to deduct from the contract price, or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.

12.5 **Notice.** Whenever any party desires to give notice unto any other party, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended and the remaining party, at the places last specified, and the places for giving of notice shall remain such until they shall have been changed by written notice in compliance with the provisions of this section. For the present, Contractor and Town designate the following as the respective places for giving of notice:

For Town: Town Manager
Town of Pembroke Park
3150 S.W. 52nd Avenue
Pembroke Park, FL 33023

Copy to: Jacob G. Horowitz, Town Attorney
Goren, Cherof, Doody, and Ezrol, P.A.
3099 E. Commercial Boulevard, Suite 200
Fort Lauderdale, Florida 33308
jhorowitz@gorencherof.com

Contractor:

AWC OF LOUISIANA, INC.
6655 Exchequer Drive
Baton Rouge, LA 70809

12.6 **Binding Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

12.7 **Headings.** Headings herein are for convenience of reference only and shall not be considered on any interpretation of this Agreement.

12.8 **Exhibits.** Each Exhibit referred to in this Agreement forms an essential part of this Agreement. The exhibits if not physically attached should be treated as part of this Agreement and are incorporated herein by reference.

12.9 **Severability.** If any provision of this Agreement or application thereof to any person or situation shall to any extent, be held invalid or unenforceable, the remainder of this Agreement, and the application of such provisions to persons or situations other than those as to which it shall have been held invalid or unenforceable shall not be affected thereby, and shall continue in full force and effect, and be enforced to the fullest extent permitted by law.

12.10 **Extent of Agreement.** This Agreement represents the entire and integrated agreement between the Town and the Contractor and supersedes all prior negotiations, representations or agreements, either written or oral.

12.11 **Legal Representation.** It is acknowledged that each party was represented by counsel in the preparation of and contributed equally to the terms and conditions of this Agreement and, accordingly, the rule that a contract shall be interpreted strictly against the party preparing same shall not apply herein due to the joint contributions of both parties.

12.12 **Counterparts and Execution.** This Agreement may be executed in multiple originals or counterparts, each of which shall be deemed to be an original and together shall constitute one and the same agreement. Execution and delivery of this Agreement by the Parties shall be legally binding, valid and effective upon delivery of the executed documents to the other party through facsimile transmission, email, or other electronic delivery.

12.13 **Anti-Human Trafficking.** Pursuant to §787.06(13),F.S., the Contractor, under penalty of

perjury, hereby attests that that the Contractor does not use coercion for laborer services as defined in §787.06, F.S.

12.14 **Employment Verification.** Contractor certifies that it is aware of and complies with the requirements of Section 448.095, Florida Statues, as may be amended from time to time and briefly described herein below.

A. **Definitions** for this Section:

1. "*Contractor*" means a person or entity that has entered or is attempting to enter into a contract with a public employer to provide labor, supplies, or services to such employer in exchange for salary, wages, or other remuneration. "Contractor" includes, but is not limited to, a contractor or consultant.

2. "*Subcontractor*" means a person or entity that provides labor, supplies, or services to or for a contractor or another subcontractor in exchange for salary, wages, or other remuneration.

3. "*E-Verify system*" means an Internet-based system operated by the United States Department of Homeland Security that allows participating employers to electronically verify the employment eligibility of newly hired employees.

B. **Registration Requirement; Termination:** Pursuant to Section 448.095, Florida Statutes, effective January 1, 2021, Contractors, shall register with and use the E-verify system in order to verify the work authorization status of all newly hired employees. Contractor shall register for and utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of:

1. All persons employed by a Contractor to perform employment duties within Florida during the term of the contract;

2. All persons (including subvendors/subconsultants/subcontractors) assigned by Contractor to perform work pursuant to the contract with the Town. The Contractor acknowledges and agrees that registration and use of the U.S. Department of Homeland Security's E-Verify System during the term of the contract is a condition of the contract with the Town; and

3. The Contractor shall comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility," as amended from time to time. This includes, but is not limited to registration and utilization of the E-Verify System to verify the work authorization status of all newly hired employees. Contractor shall also require all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. The Contractor shall maintain a copy of such affidavit for the duration of the contract. Failure to comply will lead to termination of this Contract, or if a subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than twenty (20) calendar days after the date of termination. Termination of this Contract

under this Section is not a breach of contract and may not be considered as such. If this contract is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of one (1) year after the date of termination.

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written above.

TOWN OF PEMBROKE PARK

BY: _____
MAYOR ASHIRA MOHAMMED

APPROVED AS TO LEGAL FORM:

BY: _____
JACOB G. HOROWITZ
Interim Town Attorney

AWC OF LOUISIANA, INC.

BY: _____
Name: _____
Title: _____

STATE OF _____)
COUNTY OF _____)

BEFORE ME, an officer duly authorized by law to administer oaths and take acknowledgments, by means of □ physical presence or □ online notarization, on this ____ day of _____, 2025, as _____ of _____, and acknowledged that he has executed the foregoing instrument for the use and purposes mentioned in it and that the instrument is the act and deed of _____, as _____ of _____ and who is personally known to me or has produced _____ as identification.

IN WITNESS WHEREOF, I have set my hand and seal in the State and County aforesaid

this ____ day of _____, 2025.

_____
NOTARY PUBLIC

_____
Print or Type Name

My Commission Expires:

Memo:

November
20th, 2024

To: Town of Pembroke Park, Florida

This memo confirms that AWC, Inc. is the Exclusive Distributor for Mission Communications' products and services in Florida. Florida's Eastern Time Zone. Cellular Data service and website presentation will be provided by Mission Communications', LLC, therefore all Annual Service Renewals will be invoiced by Mission Communications, LLC.

Michael Hedding
Central Regional Sales Manager
Email: mhedding@123mc.com
Mobile: 941-374-7837
Office: 877-993-1911 ext. 1033
www.123mc.com



MyDr

150/850
Installation Manual

MISSION
COMMUNICATIONS

Welcome,

This manual is intended to guide end-users through the proper installation for MyDro (M150 and M850) remote terminal units (RTUs). The beginning chapters focus on pre-installation and are intended to optimize installation. Mission recommends users read this document completely and confirm that all necessary materials have been gathered before beginning the installation process.

Prior to installation, users should complete and submit the RTU Setup Forms associated with the units to be installed to setupforms@123mc.com. New customers will have additionally received the Account Setup Form and Notification Setup Form, which should also be submitted before installing RTUs.

See the back cover of this document for information about available support resources, including weekly webinars, training tutorials, quarterly newsletters, troubleshooting documentation, and Twitter updates.

Mission Technical Support is available 24-7-365 on a responsive callback basis for after-hour emergencies at (877) 993-1911 option 2 or techsupport@123mc.com. Please have the customer name and appropriate unit serial number ready.

Thank you,
The Mission Communications Team

Warning: This symbol indicates there is caution or warning to avoid damage to your property or product.

Note: This symbol indicates that there is something that requires your special attention.

This device complies with part 15 of the FFC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device is SGS Safety Certified

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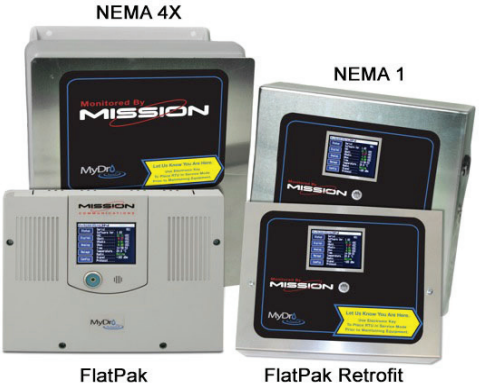
Chapter 1: Overview

M150/M850 at a Glance

Each RTU is packaged with everything necessary for a standard installation

Enclosures

NEMA 1—indoor mounting
NEMA 4X—outdoor mounting
FlatPak—control panel inner door mounting
FlatPak Retrofit—(convert M110 or M800 to MyDro)



Hardware Included with RTUs

- ☐ RTU with NEMA 1, NEMA 4X, or FlatPak enclosure
- ☐ RTU Installation Packet: RTU Form, User Guide, and emergency notice label
- ☐ Battery—12 volt, 5 amp-hour
- ☐ Flying Lead Transformer—120 VAC to 12 VAC, 1.2 amp
- ☐ Universal Antenna Mount Kit: 11' RG58 cable with SMA-M connector, pole, or wall mount bracket, mini whip antenna, (2) pole clamps, and (2) MOVs rated for 120-volt control circuits
- ☐ Accessory Bag: (4)1000 ohm long, yellow EOL resistors, (8) 1000 ohm EOL resistors, (2) current sensing switches, tie wraps, (4) wire nuts, (8) screws, (2) ferrite cores, and an interchangeable Phillips/flathead screwdriver

New customers will also be given a New Customer Packet which includes Account and Notification Setup Forms, (5) electronic keys with instructions, and the Managed SCADA document.



Recommended Tools and Materials (Not Included)

Mechanical Tools	Electrical Tools	Materials
Drill motor	Voltmeter/multimeter	18 or 22 gauge wire—2, 4, or 8 conductor stranded and shielded
Step drill or 3/4” hole saw	Wire cutters	12–14 gauge green wire for grounding the RTU (follow NEC standards)
Hack/reciprocating saw	Wire strippers	3/4” Flex conduit with straight and elbow fittings
Metal cutting blades		Unistrut rail and hardware for mounting
Pliers		Interposing relays and bases (if no dry contacts are available)
5/16” nut driver		Interposing relay (if output relays will be used)
Phillips-head screwdriver		Sealant
Ladder (for antenna mounting)		

Available Input/Output Expansion

Mission offers a variety of expansion modules to extend the utility of the RTU. Available options are summarized below:

- Safe Module Plus: intrinsically safe float circuit, local relay, 4 pulse channels
- Digital Input: adds 8 channels
- Analog Input: adds 4 channels
- Analog Output: provides 2 channels
- Pulse Input: provides 2 channels



For more information, see the Safe Module Plus and MyDro Expansion Module specification sheets, as well as the Expansion Module Installation manual.

Chapter 2: Site Survey and Connectivity Test

Prior to installation, please complete and submit the RTU Installation Form via fax at (770) 685-7913 or email to setupforms@123mc.com so Mission can set up the new unit(s) on your web portal. New customers must also complete and submit both forms within the New Customer Packet. The web portal can be accessed with the login credentials you provided within the Account Setup Form. Once completed and entered by Technical Support, alarms can be enabled for your RTU(s) immediately after installation so you can perform end-to-end testing.

By powering the RTU and testing connectivity before mounting the hardware, you can optimize the signal strength for years of trouble-free communication. The test only takes a few minutes because the included battery provides temporary power. Refer to Chapter 3 for best practices when positioning the antenna.

1. Remove the RTU from the box and place it on or near the control panel it will be monitoring. Remove the antenna cable and antenna whip from the package and hand-tighten the SMA-M connector to the radio SMA-F connection on the RTU (see Figure 1).

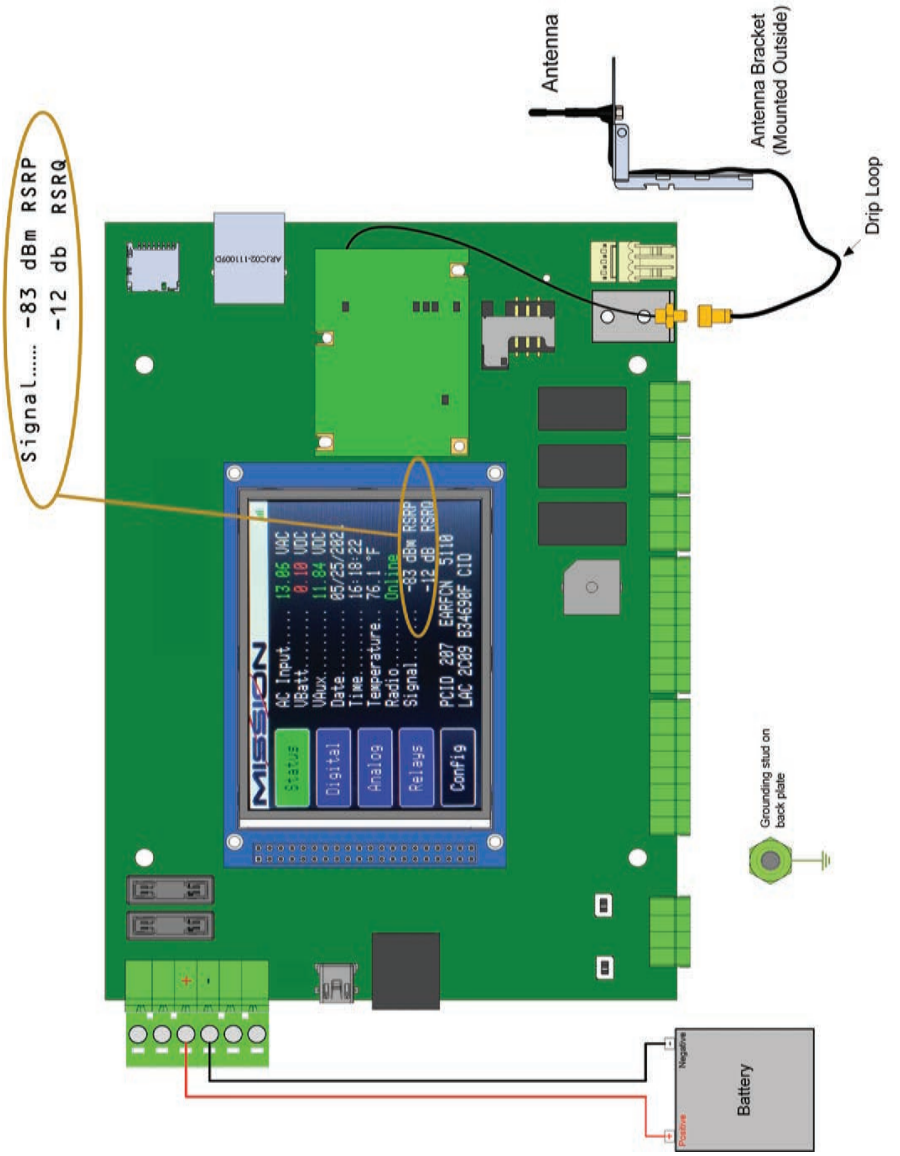
2. Screw the antenna whip onto the molded antenna base and place it outside as high as possible. Mount the antenna to the aluminum bracket.

Warning: Hand-tighten the nut on the underside plus 1/4 turn with a wrench. Do not overtighten.

3. Power the RTU with the 12 VDC battery (see Figure 1). Connect the negative (black) lead to the battery and then connect the positive (red) lead. Once the startup sequence is completed, you will hear three beeps from the buzzer. This indicates the unit has connected to Mission servers. If the RTU does not connect after two attempts, call Technical Support.

4. Notice the signal strength (RSRP) reading on the LCD as shown in Figure 1. The goal is to mount the antenna where the signal is the strongest. A -75 dB signal is better than that of -100 dB. A signal quality (RSRQ) reading closer to 0 is better. Temporarily position the antenna for about a minute in a few locations and take note of the signal strength.

Figure 1:
Main Printed Circuit Board Wired for Site Survey



Note: This diagram shows information for a MyDro using the RMDT1 radio. MyDro with other radios may display differently.

Chapter 3: Antenna Installation

Overview

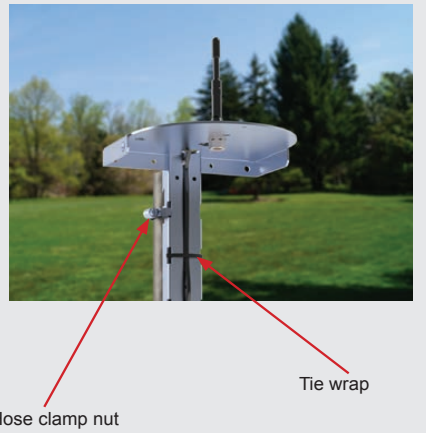
The antenna should be mounted outdoors and above other objects. By optimizing the placement of the antenna, you increase the chances that the radio can communicate with more than one cell tower. The coaxial cable should reach the Mission RTU radio connection with no severe routing of the coaxial cable. Consider where the RTU will be mounted in relation to the location of the antenna.

1. Install the antenna cable and antenna whip. Connect the SMA-M cable connector to the SMA-F connector on the mainboard (see Figure 1). Unscrew the nut from the molded antenna base. Feed the molded antenna base through the square cut out on the bracket. Place the molded antenna base in the circle cutout.

Warning: Secure the molded antenna base to the bracket with the nut. Hand-tighten the nut, plus ¼ turn with a wrench. Do not overtighten.

2. Install the mounting bracket. Mount the Universal Antenna Mount directly on the face of a flat surface or a metal pipe using the included pipe clamps (placing above any obstruction).





Antenna Best Practices

Do	Don't
Mount the antenna outside as high as possible, preferably above the roof or other objects.	Mount the antenna underground, in a dry well, or inside a canned lift station.
Mount the antenna above all metal surfaces close to the installation.	Mount the antenna horizontally or bend the antenna whip.
Coil excess coaxial in circles of 5–7 inches in diameter. Pinching or tight bends in the coaxial can restrict the high frequency/low power radio signal path in much the same way water flow is restricted through a tight bend in a hose.	Mount the antenna inside a metal control cabinet. Even fiberglass cabinets degrade the signal.
Ensure that the weight of the cable does not damage the antenna base. There should be enough slack in the cable so it does not rest or touch the top surface of the mounting bracket.	Mount the antenna on the side of a metal cabinet or adjacent to a tank. Metal surfaces will reflect the radio signal, preventing it from traveling in all directions.
Incorporate a drip loop when installing the cable to prevent water from penetrating into the building or enclosure.	Cut, lengthen, or shorten the coaxial cable. Mission can supply antenna extension cables and connectors up to 50 feet. For lengths above this limit, another RTU mounting location should be considered.

Wiring Best Practices

- Signal cables should not run parallel with high voltage AC wires (load conductors).
- Where signal wires and load conductors must cross, do so at right angles.
- High voltage should not enter the Mission RTU. Mount the supplied transformer outside the Mission enclosure.
- Lay wires in wire trays with the excess near terminations. Replace wire race covers
- Cables used for digital and analog inputs should be 18 to 22 gauge, shielded, twisted pair wire with the shield connected to ground at the RTU and not on the other end of the cable (to prevent ground loop current).
- MOVs can be installed across AC contactor coil terminals to shunt voltage spikes away from the RTU inputs and other electronics in the panel. Voltage spikes can be caused by coils de-energizing. The included MOVs are rated for 120 V circuits and will suppress excess voltage above 150 V. These parts are application dependent. They have a finite lifespan and will need to be replaced over time.

Warning: Follow requirements for field wiring installation and grounding as described in NEC and the local/state electrical codes.

Chapter 4: RTU Installation and Wiring

Locate the RTU as close as possible to the control cabinet while considering the antenna cable length.

Warning: Turn off station power to avoid damage to mainboard.

Note: MyDro units should be connected to a LPS-certified power supply (12 VAC 60 Hz ~ or 17-22 VDC).

1. Mount the enclosure.

2. Cut the conduit and wiring holes. Drill and attach the conduit in the control cabinet and Mission RTU. Use sealant where appropriate.

3. Pull the wires and cables.

4. Ground the RTU. Use 12 to 14 gauge green wire to connect the grounding lug on the backplate in the RTU to the stations Earth ground (refer to Figure 1).

   Note: If using the Safe Module Plus for sensing the high-level float in an intrinsically safe manner, install it now. Refer to the MyDro Expansion Module Installation Manual for more information.

5. Terminate digital inputs. Refer to the wiring diagram on the M150/M850 cover/door and the RTU Installation Form in the packing box. Record input names on the setup form and the diagram.

Enclosure Options

NEMA 4X

Mount outdoors on unistrut or a wall. Allow clearance for hinge (left) and key reader (right).

Consider the NEMA 4 for indoor application where wash-downs occur.

Conduit connections can enter from bottom, but leave space for the included battery.



NEMA 1

Use indoors where no wash-downs occur.

Allow for space on bottom of the enclosure for the battery.

FlatPak

Mount inside the control cabinet.

Two large holes are provided for through-wires.

Place battery inside the control cabinet.



The default digital input (DX) connections are as follows:

- D1—pump 1 (M150 runtime accumulator, M850 status and runtime accumulator)
- D2—pump 2 (M150 runtime accumulator, M850 status and runtime accumulator)
- D3—pump 3 runtime or simultaneous pump (1 and 2) runtime accumulator*(M150)
- D4—high level float
- D5—pump 1 fail
- D6—pump 2 fail
- D7—phase fail
- D8—unassigned or multiple pump runtime accumulator*(M850)

MyDro Digital Inputs feature software selectable input characteristics including:

- Dry contacts with wire fault supervision (requires 1000 ohm EOL resistors)
- Dry contacts no wire fault supervision (NF)
- Strap on current sensing switches (Mission PN OP400) with wire fault supervision
- Strap on current sensing switches (Mission PN OP400) without wire fault supervision

Note: The MyDro does not directly support the Wet Well Module. See the technical document, Wet Well Module with MyDro, if replacing M110 or M800 with Wet Well Module to MyDro.

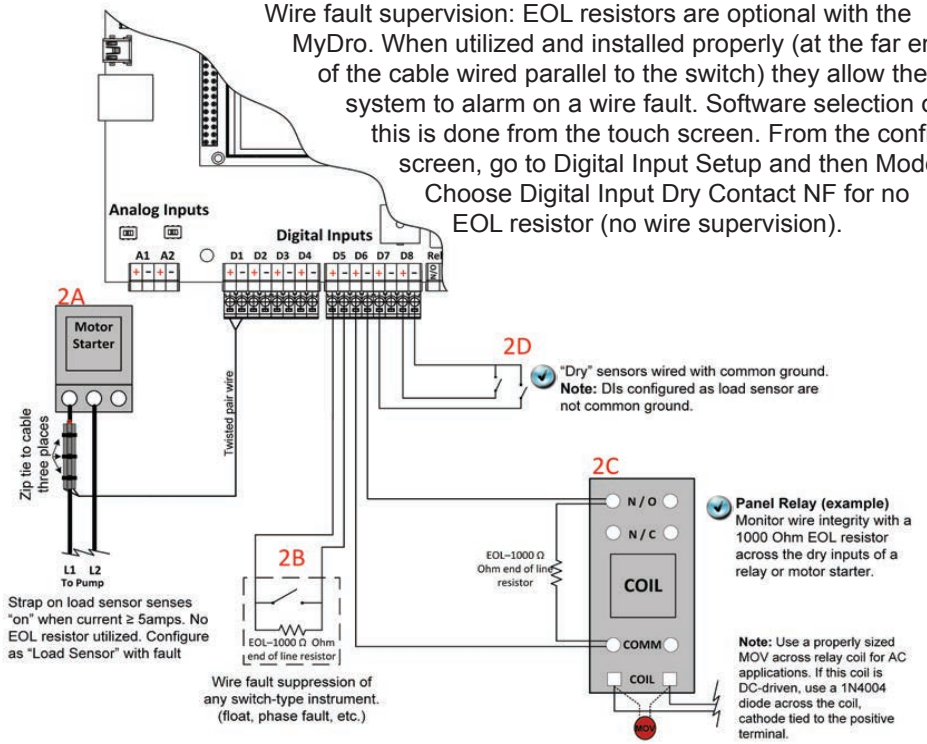
Warning: Digital inputs require dry contacts. This means that wires running to these inputs must not supply any voltage. Use an interposing relay if there are no dry contacts available.

The digital inputs are set as normally open (N/O) by default. You must use N/O contacts on pump runtime inputs. You may use either N/O or normally closed N/C contacts on digital inputs 4 through 8. Notify Mission Technical Support (or indicate on RTU setup form) to change the default settings (refer to Figure 2).Connect the shields of digital input wires to the grounding lug located inside the RTU.

Pump Runtime Inputs: On M150 RTUs, only inputs D1–D3 can be configured for pump runtimes. However, they can also be set as alarm inputs. D4–D8 on an M150 can only be configured as alarm inputs. D3* can be used for simultaneous runtimes by configuring digital input on touch screen.

On M850 RTUs, D1–D8 (on the main board) can be configured as pump runtime, pump runtime with alarm, or alarm inputs. As an option, the system can report multiple pump runtimes on M850 RTUs on D8.*

Figure 2:
Digital Inputs—Current Sensor, Supervision, and Surge Suppression



6. Terminate analog inputs. Two isolated analog inputs are available on the mainboard (refer to Figure 3). These inputs can accept a 4–20 mA or 0–5 volt signal. Position analog channel signal selector* to the left for a 4–20 mA signal and to the right for a 0–5 volt signal. If you use the auxiliary output power source, slip the ferrite core over the positive conductor (see Figure 3, Case 1 and Figure 4B).

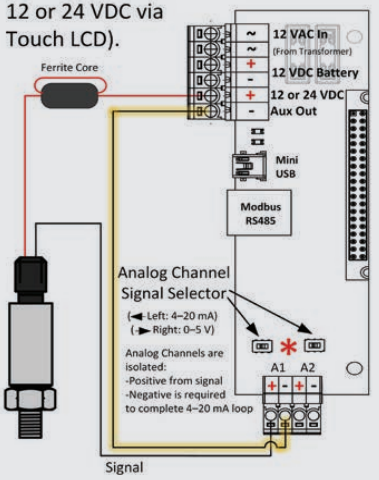
Warning: Take precautions when wiring the analog inputs. Reverse polarity may damage the main board or the sensor.

The auxiliary output on the mainboard can be used to power the transducer as seen in Case 1 of Figure 3 (250 mA maximum). When using the auxiliary output, be aware of the voltage drop in the 4–20 mA loop when wiring to the analog inputs. The auxiliary output supply voltage is software configurable for 12 or 24 VDC.

Figure 3:
Analog Input Wiring

Case 1:

Power to Analog transducer supplied by Mission Auxiliary Out. (Selectable 12 or 24 VDC via Touch LCD).



Case 2:

Power to Analog transducer supplied by external power source.

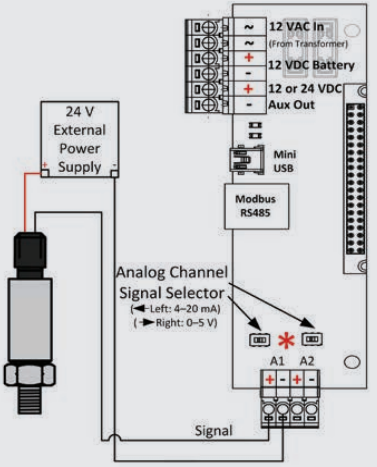


Figure 4:
Installing ferrite cores to (A) AC output and (B) auxiliary input



7. Wire the output relays. The output relays are single pole, double throw and rated up to 30 VDC or 120 VAC at 5 amp maximum. They are used for remote control applications such as Tank and Well, and analog or digital interconnect. You can wire the relay normally open (default) or normally closed (refer to Appendix B).

Warning: Relay behavior on communication failure is configurable under the Config. Menu/Relay Comm Fail Setup as Deenergize or No Change.

Warning: If power to output relays is supplied by Mission auxiliary power port it is software configurable as 12 or 24 VDC. Specify coil voltage of interposing relays appropriately.

Note: Many items should be considered with remote control applications. Refer to the Best Practices for Remote Control document.

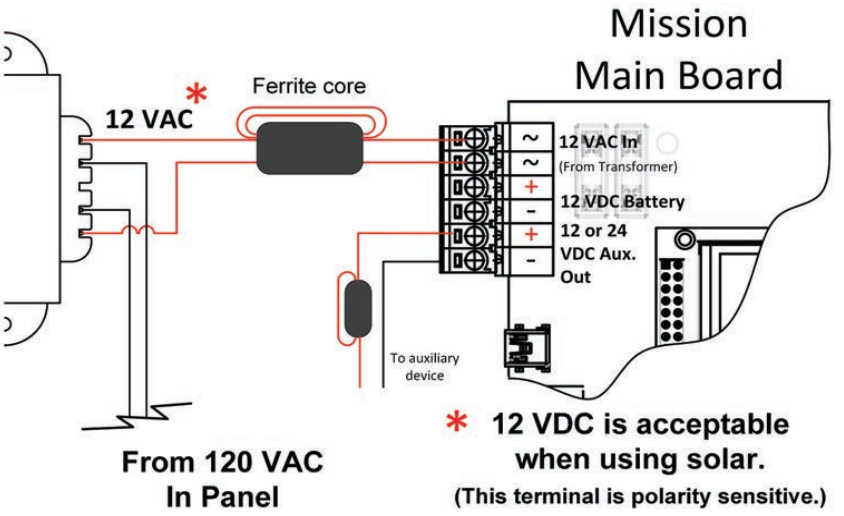
Wire the auxiliary output to common on the output relay. Wire the coil positive terminal on the interposing relay to normally open or normally closed on the output relay. Wire the negative coil terminal to Aux (-).

8. Install the 120 VAC transformer and wire AC power. Slip ferrite core over the two conductors going to the AC in connection (see Figure 4A). Mount the transformer in the control panel (not the Mission RTU).

   It is very important to only provide 12–16 VAC to the Mission mainboard AC input. Hooking up the transformer backwards will apply 1200 VAC to the mainboard and cause permanent damage. Do not install transformer in the RTU. Install it in the control cabinet.

Warning: Connect AC power to the primary input (black wires). Connect the secondary output (red wires) to the mainboard input. The transformer steps the power down from 120 VAC to 12 VAC. Do not turn on station AC power at this time.

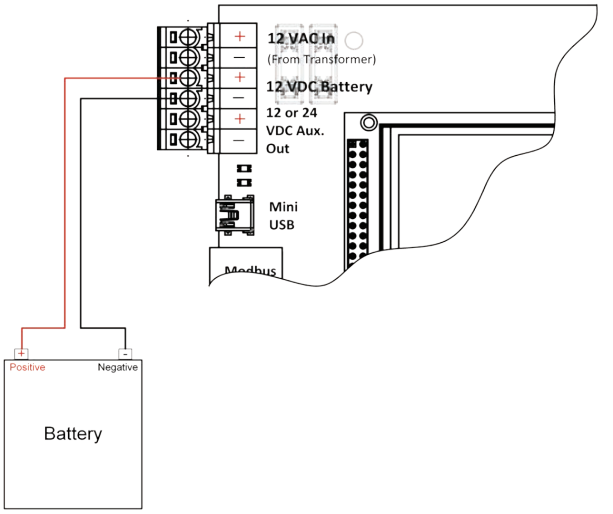
Figure 5:
Transformer Wiring



Chapter 5: RTU Startup

1. Power the Mission RTU with the 12 VDC battery only. Connect the black lead first, then the red lead (see Figure 6). The LCD will illuminate the start up screen. Once the radio sequence is complete, you will hear three beeps from the buzzer. This indicates the unit has connected to Mission servers. Allow the unit about two minutes to perform its power-up sequence and synchronization to the network. If the RTU does not connect after two attempts, contact Technical Support.

Figure 6:
Battery Wiring



2. Check the wiring connections before powering the pump station. If the wiring is correct, power the pump station, and immediately focus on the mainboard. Check to ensure the Mission RTU is still operating. If a wiring mistake has been made, it will be evident. If there appears to be a mistake, immediately remove power. If everything is correct, proceed to testing the RTU.

Warning: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries in accordance with local regulations.

Chapter 6: Test the Installation

It is imperative that alarm points are tested and that alarm notifications are received so they can be acknowledged by the customer or end-user once the unit is put into production. This includes phone numbers, text messages, email addresses, fax numbers, and pager numbers.

Additionally, it is recommended that the customer or end-user test all alarm points every six months to ensure all electrical components and alarm parameters are still functioning as desired and that alarms are being received and acknowledged by recipients. Refer to the Spring Cleaning/Fall Fix-up document for testing procedures.

Complete the following tests prior to leaving the job site:

1. Confirm AC power. Use a voltmeter across the AC terminal to verify ~12–14 VAC is present.

2. Test the battery. Remove the AC fuse and confirm the RTU stays online. Replace the AC fuse.

3. Test the radio connection. Check the radio status on the LCD screen. It should read “connected.” If not, call Technical Support at (877) 993-1911 option 2.

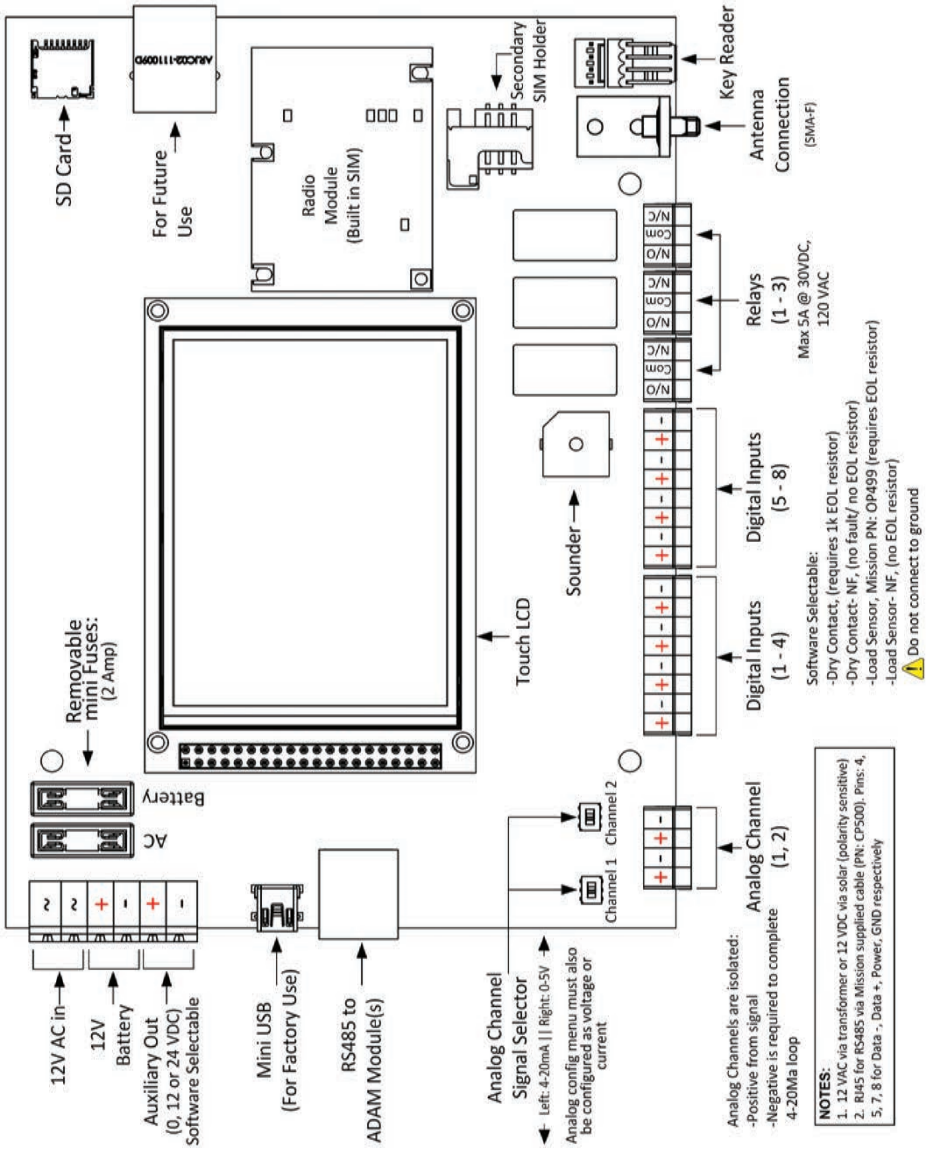
4. Inspect the status on the LCD. Analog, digitals, etc.

5. Test the digital alarm inputs. Put each digital input into an alarm state. From the touch screen press digital and confirm inputs respond as expected. Mission Technical Support is available to confirm that data is being properly transmitted and received on your web portal. A smartphone can be used otherwise.

6. Test the pump runtime inputs. Turn on pump 1. Mission D1 should respond on the touch screen. If not, check the wiring and/or end-of-line resistors. Repeat step for pump 2 and 3, if used.

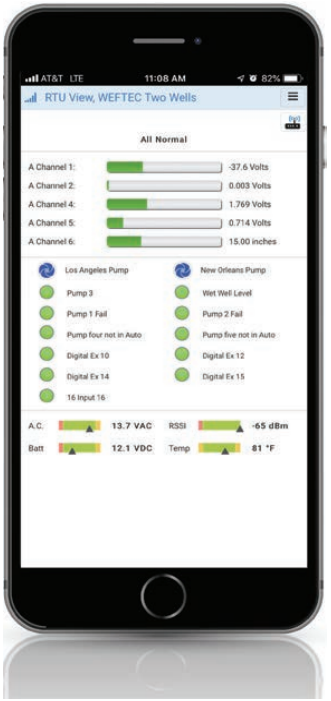
7. Test the high level alarm. Open the wet well. Pull the high-level float up and put it into alarm condition by tipping it. Ensure that the digital input four respond. If not, check the wiring and the high level float itself.

Figure 7:
Test the Installation



Verify alarm notifications are received from the tests. Log on to your web portal with the credentials specified on the Notification Setup Form. Go to the Alarms page. You should see a list of alarm events with event time and the result.

Call Mission Technical Support after testing the installation to enable the device for alarm call-outs. A technician will verify proper operation of equipment.



You may find it helpful to download the 123SCADA mobile application, available for free download on the Apple App Store and Google Play Store.

Download on the App Store

GET IT ON Google Play

Chapter 7: Site Commissioning

Enable the RTU for alarm call-outs by calling Technical Support.

Setup Forms
Ensure setup forms have been submitted to setupforms@123mc.com. Verify proper labeling on your web portal and the wiring diagram on the Mission RTU. Users with Superadmin or Admin credentials have the ability to make changes to the web portal.

Documentation and Help Guides
It is recommended that you review the online manuals for detailed operation of your RTU and web portals. This can be found on your menu selection in the Download folder under Documents.

The Operators Guide that came with the RTU should be distributed to your operators as a how-to document to get operators started with the Mission system. It covers the basics of the system capabilities, monitoring and alarming, and helpful resources.

Training Resources
Mission hosts weekly webinars nearly every Wednesday at 2 P.M. Eastern. The revolving series covers the basics, advanced web portal options, and everything in between. Mission wants to help you get the most out of your system, so please join and feel free to ask questions.

Mission also offers short video tutorials and quarterly newsletters with timeless information. Registration and archives can be found on the website.

Your unit is now ready for use. Visit 123scada.com and log in with your credentials to view your web portal or go to 123mc.com to use the legacy web portal.



Appendix A: Terminology

Alarm Inputs
A digital or analog input that is configured to dispatch a notification when the alarm state or threshold is reached.

Analog Inputs
Two analog inputs on M150 and M850 series RTUs can be used to report pressure, level, chlorine pH, or any other dynamic readings by way of a 4–20 mA or 0–5 V transducer. High and low analog alarm thresholds as well as high and low restore set points can be set from the web portal. The M850 can be expanded to 6 analog inputs via expansion modules.

Digital Inputs
Eight inputs are available for sensing items like pump run, float status, or pump fail. They can be electrically configured (via LCD/Config/Digital Input) for dry inputs or the strap on current sensor where greater than ~5 amps indicates run. They can be logically configured as alarm or accumulators for hourly pump run time and starts reporting. The M150 supports up to three pump run time accumulators, the M850 supports up to eight. Also see end-of-line resistor.

Digital Outputs
Three relay outputs can be remotely controlled to turn on pumps, wells, valves, or security lights. Multiple M850s can be linked so an event at one station causes a relay change at another. Mission's Tank and Well Control option and Intertie rely on this feature. Consult Best Practices for Remote Control Digital Intertie for more information (123mc.com/literature).

Electronic Key Reader
The included key reader allows on-site personnel to log a site visit, acknowledge, and suspend alarms while service is performed at the station. Management can track the key entries for productivity and regulatory reporting purposes. The functionality of the key can be configured at the web portal.

End-of-Line Resistor
A resistor of known value (1000 ohm) that is used to terminate protective loops, and provide wire supervision. Wire the EOL in parallel to a switch instrument. The requirement for an end-of-line resistor is software configurable for fault (requires resistor) or no fault.

Long Term Evolution (LTE)
Generally known as 4G (see Radio Access Technology (RAT)) but by definition an evolutionary standard. 5G builds on the LTE standard with the addition of millimeter wave and ultra low latency technologies. The small radio waves are appropriate for dense urban areas but not good for long distance propagation.

M150 vs. M850
Generally, the M850 is more appropriate where analog sensors are present, at master lift stations, and for remote control applications. Both RTUs provide real-time alarms. The M150 accumulates pump starts each hour whereas the M850 reports real-time pump state changes. The M850 reports analog values every two minutes or sooner (>5% change) for trending purposes. The M150 supports up to three pump runtime inputs whereas the M850 supports up to eight.

Metal Oxide Varistor (MOV)
The included MOVs are used to protect circuits against high transient voltage spikes, often caused when relay coils de-energize. They are rated for 150 volts. Voltage above 150 volts will be dissipated. The MOVs are non-conductive during normal operation. Consult your electrician before installing the MOVs.

Power and Backup Power
The M150 and M850 RTUs operate on 12 VAC via the supplied transformer. The 120 to 12 VAC transformer mounts outside the RTU to minimize the chances of induced voltages. A five amp-hour battery with a charging circuit powers the RTU for 18–50 hours (M850 and M150) during a power failure. AC power fail alarm will be dispatched. A low battery alert will be dispatched in the morning if the battery voltage fell below 11.5 volts anytime the previous day.

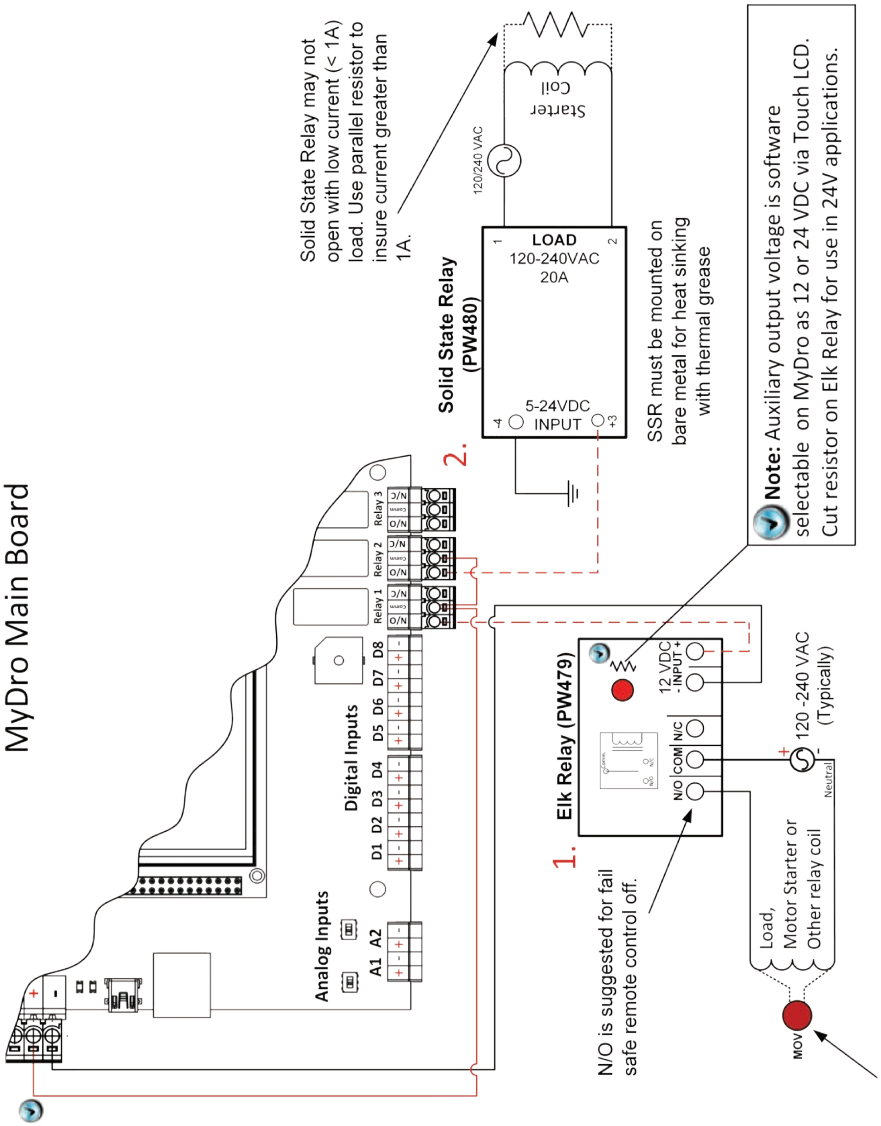
Pulse Inputs Options
Pulse inputs can be used to report data such as flow, water meter, or rainfall totals. If no rainfall data is monitored at the site, Mission's web site presents data from the closest National Weather Service reporting station. Four pulse inputs are available with the Safe Module Plus.

Radio Access Technology (RAT)
As cellular networks evolve, radios must be updated to the current RAT. See Long Term Evolution (LTE).

Runtime Inputs
A digital input that is configured to calculate runtime minutes and pump starts each hour. Alarm notifications are generally not enabled for runtime inputs.

SIM (Subscriber Identity Module)
This card carries an identification number that contains the billing credentials for certain cellular radio. Removal of card will disable operation.

Appendix B: Output Relay Diagram



Installation Notes

Support:

Webinar
Mission hosts weekly webinars from 2–3 P.M. Eastern every Wednesday, except for weeks of national holidays and trade shows. Staff members discuss the system hardware and software with live Q&A.

Training Tutorials
A variety of videos are provided to cover topics relating to the use of the Mission system. These can be found on the 123SCADA web portal as well as the marketing website.

Newsletter
The quarterly newsletter provides useful information for water and wastewater professionals. Each issue includes tips and tricks, new features, interesting industry news, and unique customer applications. Access the full archive and subscribe from the marketing website.

Documentation
Many documents are available through the web portal and marketing website which provide information about best practices, system troubleshooting, and more.

Twitter
Follow @123mc for notices about system enhancements, scheduled maintenance, and carrier issues, as well as reminders for webinar, trade shows, and more. Download the mobile app and configure push notifications to receive immediate updates.

MISSION COMMUNICATIONS

Web
123mc.com

Technical Support
(877) 993-1911 option 2
techsupport@123mc.com,
setupforms@123mc.com

Sales
sales@123mc.com
(877) 993-1911 option 4

The Next Generation of Wireless Real–Time Alarm, Monitoring, and Remote Control

All of the functionality of the legacy series (M110 and M800) with an onboard interactive display and enhanced electronics



MyDro 150 and 850 RTUs

Easy to Install

Each remote terminal unit (RTU) includes all necessary hardware for a standard installation, such as a cellular radio, enclosure, backup battery, transformer, antenna with cable, and mounting hardware. Purpose–built RTUs simplify and speed installation. There is no programming required, and RTUs are self–enrolling.

Reliable Wireless Communications

The RTU features a game–changing radio with an embedded SIM that supports multiple carriers (AT&T, T–Mobile, Verizon, and Telenor) as well as a removable SIM for future options such as FirstNet. That means access to multiple carriers is automatic with no need for a site visit to change a SIM. There are no radios to license, nor cellular contracts to set up.

Real–Time Alarms Delivered To All Devices

Real–time alarms are delivered via phone call, text message, email, fax, page, and even to an existing HMI software through an OPC data link. Each alarm is logged with a time stamp for tracking and reporting. The alarm call–out schedule is easy, flexible, and intuitive to set up.

Managed Service–The Complete Package

The Mission system includes all cellular data service, data storage, alarm callouts, reports, and on–call, 24–7–365 technical support. The highly reliable turnkey system offers more features at a lower cost than an in–house setup. No engineering or programming is required, and there are no networks to maintain.

View data and reports using the secure 123SCADA web portal, accessible from any web–enabled device. The 123SCADA user interface is designed to mimic industry–standard Human Machine Interface (HMI) Supervisory Control and Data Aquisition (SCADA) and also includes a legacy user mode. Tabular and graphical reports can be used for compliance reporting and comparative studies. System enhancements are available immediately and included at no cost.

M150 RTUs

Real–Time Alarms with Hourly Summaries

M150 RTUs summarize pump runtimes and pump starts hourly. All alarm data is reported in realtime. Analog data and RTU status are reported hourly. Simultaneous pump runtimes can be reported when two pumps run.

M850 RTUs

Real–Time Alarms and Streaming Data

M850 RTUs report pump starts and stops in real–time. Analog values are reported every two minutes or on a five percent change. Volumetric flow calculations can utilize this information along with sump volume (as determined by an analog level sensor or fixed entries) to calculate hourly volumetric flow rates.

Remote Control

Expand system operations with optional remote control for off–site wells, tanks, gates, chlorine dosers, variable frequency drives, and more. Optional automatic remote control interfaces include the Tank and Well Control Package, Digital Interconnect, and Analog Interconnect.

LCD Touch Screen

- Displays current status
- Supports local configuration

Radio

- Cellular radio supports multiple carriers to ensure optimal connection and signal quality
- No radio licenses or site path studies required

Expandable

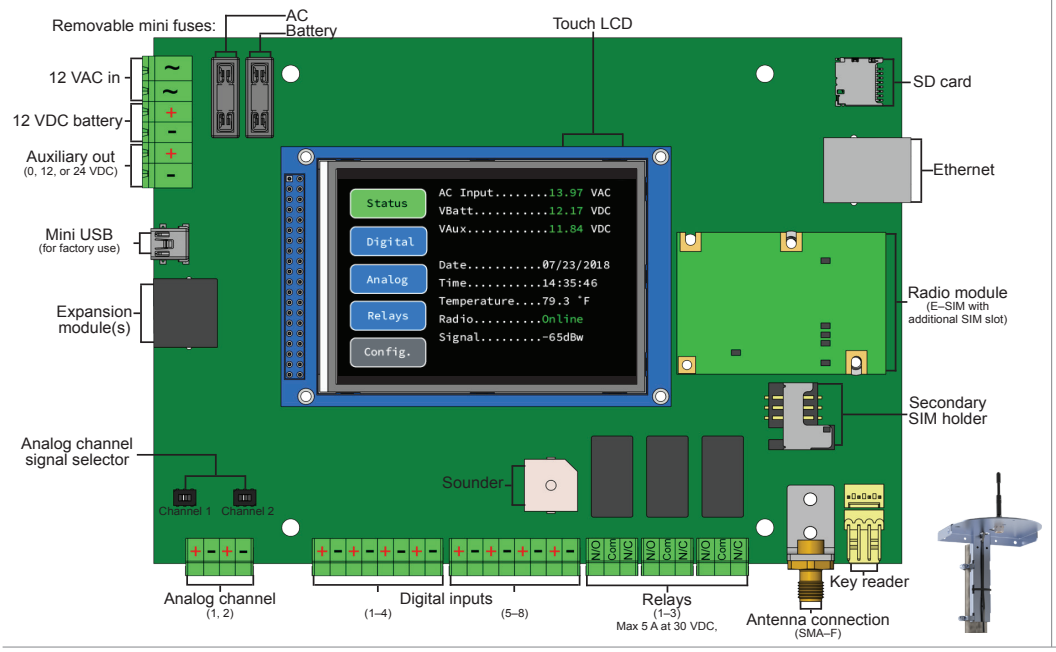
- Up to 16 digital inputs, 6 analog inputs, 4 pulse inputs (with SMP), and 2 analog outputs, simultaneously
- Onboard digital inputs configurable for wire fault supervision or strap–on current sensing switch for easier pump run indication
- RS485 for digital, analog, and pulse expansion

Enhanced

- 12 or 24 VDC auxiliary output for battery–backed analog instrument loop power
- Over–the–air upgradeable firmware

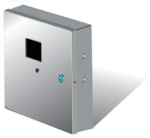
	MyDro 150	MyDro 850
Wastewater	Duplex and triplex sewer lift station, industrial water quality (WQ) alarming, lift station generator alarming	Master pump station monitoring and remote control, critical process monitoring, open channel flow monitoring, sewer station power monitoring, reuse water monitoring and control
Water	Pump station alarming, reservoir level alarming, remote valve alarming, chlorine (Cl) residual WQ alarming, pressure reducing valve station alarming	Pump station monitoring, tank and multiple well control, remote valve monitoring and control, Cl residual WQ alarming, flow or pressure monitoring
Other	Gate status alarming, rainfall monitoring	Septic offload and billing, custody transfer and billing, canal level monitoring and gate control, I&I flow, level data logging

Technical Specifications





Outdoor NEMA 4X enclosure:
w 13.25 in x h 13.75 in x d 6.25 in
With sun shield
Weight: 7.6 lbs



NEMA 1 enclosure:
w 11.375 in x h 11.25 in x d 3.5 in
Use indoors, wall mounting
Weight: 3.6 lbs



FlatPak NEMA 1 enclosure:
w 10.5 in x h 7.75 in x d 1.5 in
Use inside MCC cabinet
Weight: 1.8 lbs

5 Ah battery weighs additional
3.6 lbs

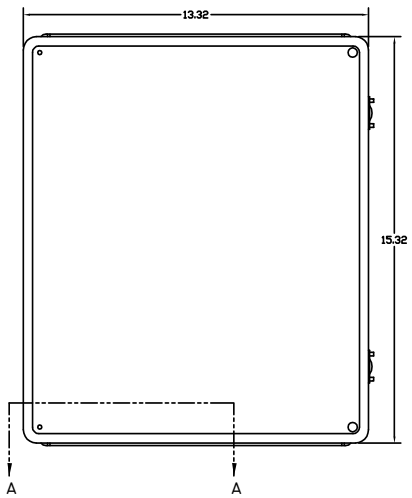
		MyDro 150	MyDro 850
Data	**Alarm Data**	Real–time	Real–time
	Pump State	Summarized hourly	Real–time
	Analog Reporting	Current value reported hourly	Every 2 minutes or on 5% change
	Device Health	Built–in inputs reported hourly	
Input/Output	**Digital Inputs**	8 onboard, dry digital inputs with selectable wire fault supervision or direct attach current sensing switch; Expandable to 16 with PN OP653	
		3 configurable for pump run summary reporting; Simultaneous runtimes reported when 2 pumps are monitored	8 configurable for pump run; Pump states reported in real–time. Simultaneous pump runtime reporting supported for up to 7 pumps
	Analog Inputs	2 onboard, 4–20 mA isolated or 0–5 VDC; 4 alarm set points each; Expandable to 6 with PN OP465	
	Relay Outputs	3 remotely controllable, form C, dry contact relay outputs; 5 A at 30VDC, SPDT, N/O, or N/C	
	RS485	Support for specified expansion modules	
	Pulse Inputs	4 channels with Safe Module Plus expansion module PN OP750	
		15–minute reporting	2–minute reporting
	Analog Output	2 channels (4–20 mA or 0–5 V) with PN OP461	
	Electronic Key Reader	Key reader for site activity tracking and service mode	
	Built–in Inputs	AC voltage, battery voltage, board temp, and signal strength; Optional second key reader	
Electrical	**AC Power**	Supervised 120 VAC to 12 VAC, 1.2 A, UL–recognized class II/class III transformer	
	Backup Power	12 V, 5 Ah battery standard with enhanced charging system	
		Up to 50 hours	Up to 18 hours
	Auxiliary	Auxiliary output selectable 12 VDC or 24 VDC for battery–backed analog instrument loop powering; 250 mA max	
	Removable Terminals	Included: Amphenol PN 20020008–G061B01LF (6 pin for power), 20020004–D081B01LF (D08, D04, D03 for I/O)	
	Power Consumption	4.2 W	
Other	**Enclosures**	FlatPak (PN M153), NEMA 1 (PN M151), NEMA 4X (PN M152), Large NEMA 4X (PN M152L)	FlatPak (PN M853), NEMA 1 (PN M851), NEMA 4X (PN M852), Large NEMA 4X (PN M852L)
	Environment	Operating temperature -20–60 °C, non–condensing	
	Cellular Radio	Radios make live, continuous, encrypted TCP socket connections; Payload is end–to–end acknowledged; Penta band (850, 900, 1700, 1900, 2100 mHz); AT&T and partners: LTE, HSPA+, 3G; Verizon and partners: LTE, EVDO, 1XRTT	
	Antenna	Omnidirectional antenna with 11 ft cable, SMA termination, universal mounting bracket	
	Options	Optional SCADA integration OPC link (PN SW586) to client/server HMI, Tank and Well Control Package (see Accessory Catalog for details)	
	Service	Requires Service Packages for the unit and optional expansion boards (see Accessory Catalog for details)	
	Warranty	One–year manufacturing and material warranty	

Safety Certified

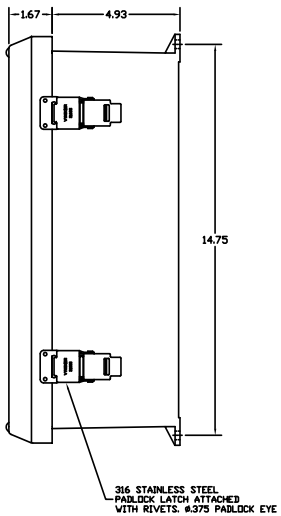
MISSION COMMUNICATIONS
(877) 993-1911 • sales@123mc.com • 123mc.com

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

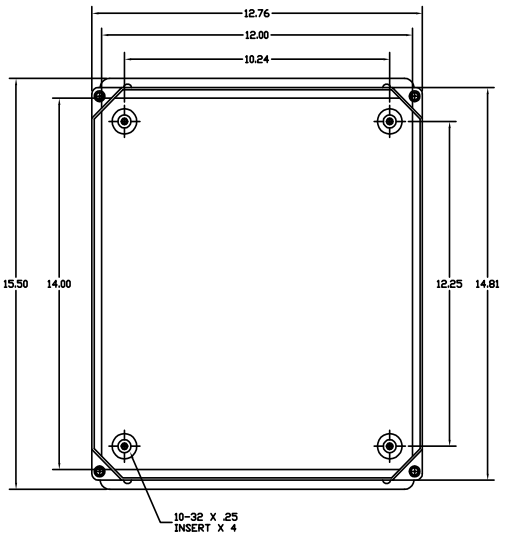
FRONT VIEW



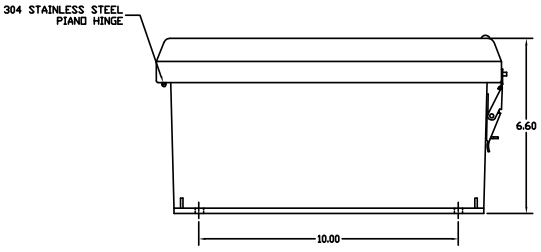
RIGHT SIDE VIEW



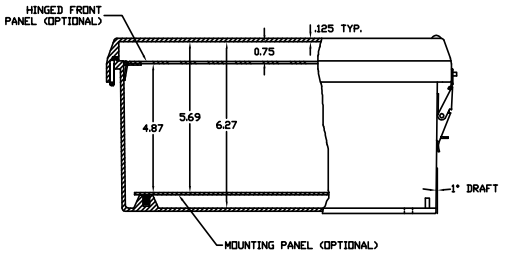
FRONT VIEW–COVER REMOVED



END VIEW



SECTION A–A



NOTES:
1. ENCLOSURE MATERIAL MADE OF GRAY (RAL 7036) HOT MOLDED FIBERGLASS REINFORCED POLYESTER.
2. U.L. LISTED PER STD. 508. (FILE# E54315)
3. CSA CERTIFIED PER STD. C22.2 NO. 94. (FILE# LR36508)
4. NEMA RATED TYPE 3, 3R, 3S, 4, 4X,12 AND 13.
5. IEC 529 RATED IP 68.
6. RESISTANT TO TEMPERATURES UP TO 150 DEG C.
7. SELF EXTINGUISHING AND HALOGEN FREE.
8. ACCESSORIES INCLUDE: BACK PANELS, HINGEABLE FRONT PLATES, HINGED COVERS, PRINT POCKET, LATCHES, WINDOWS, AND VENTILATORS.
9. CABINETS ARE MAINTENANCE FREE AND CORROSION RESISTANT.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES
DECIMALS
.XX ± .030 .XXXX ± .005
.XXX ± .010
DO NOT SCALE DRAWING

THIS DRAWING IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF VYNCKIER ENCLOSURE SYSTEMS, AND SHALL NOT BE REPRODUCED OR DISCLOSED TO OTHERS EXCEPT BY EXPRESS WRITTEN PERMISSION OF VYNCKIER ENCLOSURE SYSTEMS INC.

DRAWN	KEITH CHAPMAN	DATE 2/14/01
CHECKED		
DESIGN		

VYNCKIER
ENCLOSURE SYSTEMS LTD.

VJ SERIES ENCLOSURE
VYNCKIER PART# VJ1412HWPL2

SIZE	FSCM NO.	DWG NO.	REV
D		VJ1412HWPL2	0

SCALE: FULL SHEET 1 OF 1

Agenda Item Report

Subject:	Approval of Meeting Minutes September 11, 2024, Budget Hearing September 11, 2024, Regular Commission Meeting September 25, 2024, Workshop Commission Meeting September 25, 2024, Final Budget Hearing October 15, 2024, Regular Commission Meeting
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Cynthia Garcia-Lima, Town Clerk
Dept/Group:	Clerk
Recommendation for Counsel to consider:	
Background Information:	
Staff Recommendations:	
Financial Implications:	There are no financial impacts.
Alternatives:	

ATTACHMENTS:

09.11.2024 Budget Hearing Meeting
09.11.2024 Regular Commission Meeting
09.25.24 Budget Final Hearing
09.25.24 Workshop Commission Meeting
10.15.24 Regular Commission Meeting

MINUTES
BUDGET HEARING MEETING

6:00 PM - Wednesday, September 11, 2024
Commission Chambers

The BUDGET HEARING MEETING of the Town of Pembroke Park was called to order on Wednesday, September 11, 2024, at 6:00 PM, in the Commission Chambers, with the following members present:

PRESENT: Vice Mayor Erik Morrissette; Acting Clerk Commissioner Musfika Kashem; and Commissioner Geoffrey Jacobs

EXCUSED: Mayor Ashira Mohammed and Clerk Commissioner William Hodgkins

1 CALL TO ORDER

2 PLEDGE OF ALLEGIANCE
Led by Mayor and Commissioners

3 ROLL CALL
The meeting was called to order at 6:20 pm by Vice Mayor Morrissette. Present at the meeting were Erik Morrissette, Vice Mayor; Musfika Kashem, Acting Clerk Commissioner; and Geoffrey Jacobs, Commissioner.

Additional staff in attendance were Chandler Williamson, Town Manager; Jacobs Horowitz, Town Attorney; Marlen Martell, Town Clerk; Mark Pakula, Information Technology Director; Suzi Reutlinger, Executive Assistant to Commission; and Daniel Decoursey, Interim Police Chief, and Jason Ochoa, Deputy Police Chief

4 DELETIONS OR WITHDRAWALS TO THE AGENDA

COMMISSIONER JACOBS MADE A MOTION TO APPROVE AS-IS. ACTING CLERK KASHEM SECONDED THE MOTION, AND IT PASSED 3-0.

5 PRESENTATIONS / PROCLAMATIONS

5.1 Finance Consultant David DiLena presented to the Commission a PowerPoint presentation of the tentative millage rate of 8.50 and the tentative budget.

6 PUBLIC COMMENTS RELATED TO AGENDA ITEMS / GOOD & WELFARE

NONE

7 RESOLUTIONS

7.1 TENTATIVE MILLAGE RATE OF 8.5 MILLS - Interim Town Manager Williamson, Finance Consultant DiLena

RESOLUTION NO. 2024-017
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK **ADOPTING A TENTATIVE MILLAGE RATE OF 8.5000 MILLS FOR GENERAL OPERATING BUDGET PURPOSES FOR FISCAL YEAR 2024-2025; PROVIDING FOR THE ESTABLISHMENT OF AND SETTING FORTH THE DATE, TIME AND LOCATION OF THE PUBLIC HEARING TO FORMALLY ADOPT THE FY 2024-2025 MILLAGE RATE;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

COMMISSIONER JACOBS MADE A MOTION TO APPROVE RESOLUTION 2024-017 AND SETTING 8.50 MILLS AS THE TENTATIVE MILLAGE RATE. ACTING CLERK COMMISSIONER KASHEM SECONDED THE MOTION WHICH PASSED UNANIMOUSLY 3-0.

7.2 ADOPTION OF PROPOSED BUDGET FY25 - Interim Town Manager Williamson, Finance Consultant DiLena

RESOLUTION NO. 2024-018
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **ADOPTING A TENTATIVE BUDGET FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2024 AND ENDING SEPTEMBER 30, 2025, ATTACHED HERETO AS EXHIBIT "A;" DETERMINING AND FIXING THE AMOUNTS NECESSARY TO CARRY ON THE GOVERNMENT OF THE TOWN FOR THE ENSUING YEAR; DETERMINING THE AMOUNT OF APPLICABLE FUNDS ON HAND; ESTIMATING RECEIPTS AND EXPENDITURES FOR ALL FUNDS;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Commissioner Jacobs discussed additional cuts such as: contracting services, the cost of Town cell phones for the Commission, and unnecessary studies such as the Parks Master Plan.

COMMISSIONER JACOBS MADE A MOTION TO APPROVE RESOLUTION NO. 2024-018 REGARDING THE TENTATIVE BUDGET. ACTING CLERK COMMISSIONER KASHEM SECONDED THE MOTION, AND IT PASSED UNANIMOUSLY 3-0 ON A POLL VOTE.

8 DISCUSSION

There were no discussion items.

9 ATTORNEY REPORTS

Town Attorney Horowitz informed the Commission that the Final Budget hearing was scheduled for Wednesday, September 25, at 6:00 PM.

10 TOWN MANAGER REPORTS

Interim Manager Williamson thanked everyone for their efforts and would be conducting fee studies based on the suggestions from Commissioner Jacobs.

11 COMMISSION REPORTS

11.1 Commissioner Jacobs - None
Acting Clerk Commissioner Kashem - None
Clerk Commissioner Hodgkins - None
Vice Mayor Morrissette - None
Mayor Mohammed - None

12 ANNOUNCEMENTS

12.1 Final Budget Hearing is scheduled for Wednesday, September 25th at 6:00 PM

13 ADJOURNMENT

With no further business the meeting adjourned at 7:10 PM

Commission approved on:

ATTEST:

Cynthia Garcia-Lima, Town Clerk

IN ACCORDANCE WITH THE PROVISIONS OF F.S. SECTION 286.0105, IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE BOARD, AGENCY, OR COMMISSION WITH RESPECT TO ANY MATTER CONSIDERED AT THIS MEETING OR HEARING, HE OR SHE WILL NEED A RECORD OF THE PROCEEDINGS, AND, FOR SUCH PURPOSE, HE OR SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

ANY PERSON REQUIRING AUXILIARY AIDS AND SERVICES AT THIS MEETING MAY CALL THE TOWN CLERKS OFFICE AT 954-966-4600 AT LEAST TWO CALENDAR DAYS PRIOR TO THE MEETING. IF YOU ARE HEARING OR SPEECH IMPAIRED PLEASE CONTACT THE FLORIDA RELAY SERVICES BY USING THE FOLLOWING NUMBERS: 1-800-955-8770 (VOICE) OR 1-800-955-8771 (TDD)

DECORUM - ALL COMMENTS MUST BE ADDRESSED TO THE COMMISSION AS A BODY AND NOT TO INDIVIDUALS. ANY PERSON MAKING IMPERTINENT OR SLANDEROUS REMARKS, OR WHO BECOMES

BOISTEROUS WHILE ADDRESSING THE COMMISSION, SHALL BE BARRED FROM FURTHER AUDIENCE BEFORE THE COMMISSION BY THE PRESIDING OFFICER, UNLESS PERMISSION TO CONTINUE OR AGAIN ADDRESS THE COMMISSION IS GRANTED BY THE MAJORITY VOTE OF THE COMMISSION MEMBERS PRESENT. NO CLAPPING, APPLAUDING, HECKLING OR VERBAL OUTBURSTS IN SUPPORT OR IN OPPOSITION TO A SPEAKER OR HIS/HER REMARKS SHALL BE PERMITTED. NO SIGNS OR PLACARDS SHALL BE ALLOWED IN THE COMMISSION CHAMBERS. PLEASE MUTE OR TURN OFF YOUR CELL PHONE OR PAGER AT THE START OF THE MEETING. FAILURE TO DO SO MAY RESULT IN BEING BARRED FROM THE MEETING. PERSONS EXITING THE CHAMBER SHALL DO SO QUIETLY.

Cynthia Garcia-Lima
Town Clerk

MINUTES
REGULAR COMMISSION MEETING

7:00 PM - Wednesday, September 11, 2024
Commission Chambers

The REGULAR COMMISSION MEETING of the Town of Pembroke Park was called to order on Wednesday, September 11, 2024, at 7:00 PM, in the Commission Chambers, with the following members present:

PRESENT: Mayor Ashira Mohammed; Vice Mayor Erik Morrissette; Clerk Commissioner William Hodgkins; Acting Clerk Commissioner Musfika Kashem; and Commissioner Geoffrey Jacobs

EXCUSED:

1 CALL TO ORDER

2 PLEDGE OF ALLEGIANCE
Led by Mayor Mohammed and Commissioners

3 ROLL CALL
The meeting was called to order at 7:34 pm by Mayor Mohammed. Present at the meeting were Ashira Mohammed, Mayor; Erik Morrissette, Vice Mayor; William Hodgkins, Clerk Commissioner; Musfika Kashem, Acting Clerk Commissioner; and Geoffrey Jacobs, Commissioner.

Additional staff in attendance were Jacob Horowitz, Town Attorney; Marlen Martell, Town Clerk; Mark Pakula, Information Technology Director; Suzi Reutlinger, Executive Assistant to Commission; Chandler Williamson, Town Manager; and Daniel Decoursey, Interim Police Chief; and Jason Ochoa, Deputy Police Chief

4 DELETIONS OR WITHDRAWALS TO THE AGENDA

A motion was made to approve the agenda with changes.

Mayor Mohammed requested item 12.2 be removed from agenda.

ACTION: Commissioner Jacobs made a motion to approve the agenda without item 12.2. Vice Mayor Morrissette seconded the motion, and it passed unanimously 5-0 on a poll vote.

5 PRESENTATIONS / PROCLAMATIONS

5.1 Diaper Week
Hispanic Heritage Month
Constitution Week
Suicide Prevention Month
Broward Mental Health Summit Day, September 12th

Proclamations were read into the record by title only.

5.2 CLICK TO VIEW: 90 Day presentation - Interim Police Chief Decoursey, Deputy Chief Ochoa

A PowerPoint presentation was delivered to highlight the changes implemented in the police department over the past 90 days.

6 PUBLIC COMMENTS RELATED TO AGENDA ITEMS / GOOD & WELFARE

There were no public comments.

7 CONSENT AGENDA

7.1 Approval of Minutes - Town Clerk Martell
Special Commission Meeting, July 9th

ACTION: Commissioner Jacobs made a motion to approve the consent agenda. Acting Clerk Commissioner Kashem seconded the motion, and it passed unanimously 4-0 on a poll vote.

8 RESOLUTIONS

8.1 Cybersecurity Standard - IT Director Pakula

RESOLUTION NO. 2024-008
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **TO ADOPT STANDARDS TO SAFEGUARD AGAINST CYBERSECURITY THREATS; ADOPTING THE METHODS AND STANDARDS SET FORTH IN VERSION 1.1 OF**

THE FRAMEWORK FOR CYBERSECURITY ADOPTED BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY, AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read into the record by title only Resolution No. 2024-008.

A motion was made to approve Resolution No. 2024-008 to adopt standards to safeguard against cybersecurity adopted by the national institute of standards and technology.

ACTION: Vice Mayor Morrissette made a motion to approve the resolution. Acting Clerk Commissioner Kashem seconded the motion, and it passed unanimously 5-0 poll vote.

Mayor Mohammed excused herself from the meeting at 9:15 pm

8.2 Sweeney's Sign Variance - 4200 Hallandale Beach Blvd., - Planning Consultant Vonder Meulen

RESOLUTION NO. 2024-015
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **APPROVING SIGN VARIANCE APPLICATION NO. 24-SV-03, ATTACHED HERETO AS EXHIBIT "A," AND GRANTING THE SIGN VARIANCE FOR THE PROPERTY GENERALLY LOCATED AT 4200 W. HALLANDALE BEACH BOULEVARD, PEMBROKE PARK, FLORIDA;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE

Town Attorney Horowitz read into the record by title only Resolution No. 2024-016.

Planning Consultant Vonder-Meulen spoke on the record discussing the item. The applicant requested reducing (1) parking space. He explained that this request will assist with added beautification and safety. The parking spaces in front of the building, when vehicles are exiting, will back up onto Hallandale Beach Blvd.

The floor was opened for public comments.

David George, owner of Sweeney's spoke on the record.

A presentation was made by Craig McDonald on behalf of the owner.

A motion was made to approve Resolution No. 2024-015 Sweeney's sign variance.

ACTION: Commissioner Jacobs made a motion to approve the resolution. Vice Mayor Morrissette seconded the motion, and it passed unanimously on a 5-0 poll vote.

8.3 Sweeneys Parking Reduction - Planning Consultant Vonder Meulen
File No: 24-PR-01
Applicant: Sweeney's VII LLC
Address: 4200 W Hallandale Beach Blvd
Request: Parking Reduction Approval – to reduce parking from 10 parking spaces to 9 parking spaces to redevelop a retail use.

RESOLUTION NO. 2024-016
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **APPROVING THE PARKING REDUCTION APPLICATION NO. 24-PR-01, ATTACHED HERETO AS EXHIBIT "A," SUBMITTED BY SWEENEYS VII LLC, A FLORIDA LIMITED LIABILITY COMPANY, FOR CERTAIN REAL PROPERTY LOCATED IN LAKE FOREST SEC 4 RESUB POR 43-45 B LOT 8 W 10,8A W 10,9 LESS W 10, 9A LESS W 10 BLK 50, PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA; PROVIDING FOR CONDITIONS OF APPROVAL; PROVIDING FOR RECORDING OF PARKING REDUCTION ORDER IN THE PUBLIC RECORDS** OF BROWARD COUNTY, FLORIDA; PROVIDING FOR SEVERABILITY; SUPERSEDING CONFLICTING RESOLUTIONS AND PROVIDING AN EFFECTIVE DATE.

Town Attorney Horowitz read into the record by title only Resolution No. 2024-016.

Planning Consultant Vonder-Meulen addressed the item on the record, discussing the applicant's request to reduce one parking space. This change is intended to enhance both beautification and safety. Reducing the parking space will prevent vehicles from backing out onto Hallandale Beach Blvd. when exiting the building.

The floor was opened for public comment.

David George, owner of Sweeney's, spoke on the record. A presentation was made by Craig McDonald on behalf of the owner. A motion was made

to approve Resolution No. 2024-016, regarding the reduction of parking for Sweeney's.

ACTION: Commissioner Jacobs made a motion to approve resolution. Vice Mayor Morrissette seconded the motion, and it passed unanimously 5-0 poll vote.

8.4 Commercial Amnesty Program - Mayor Mohammed, Town Attorney Horowitz

RESOLUTION NO. 2024-014
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **PROVIDING FOR THE AMNESTY PROGRAM GUIDELINES FOR COMMERCIAL PROPERTY OWNERS WHO PERFORMED WORK WITHOUT PERMITS TO FACILITATE BRINGING PROPERTY INTO COMPLIANCE THROUGH JANUARY 31, 2026;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

Town Attorney Horowitz explained that, as the commission may recall, the residential amnesty program was extended in May. This program, originally adopted in 2020 before his tenure, provided detailed guidelines to assist residential property owners in addressing code violations. In May, the commission directed his office to prepare a resolution to expand the program to include commercial properties. The resolution simply extends the existing program, now valid through January 31, 2026, to include both residential and commercial properties.

Commissioner Jacobs made a motion not to approve resolution no. 2024-014, which was seconded by Acting Clerk Commissioner Kashem. Immediately, acting Clerk Commissioner Kashem withdrew her second.

The commission discussed the item and directed staff to forward it to the workshop commission meeting on September 25, 2024.

A motion was made to forward resolution no. 2024-014 to the next workshop commission meeting.

9 ORDINANCES 2ND READING

9.1 FDOT - Town Attorney Horowitz

ORDINANCE NO. 2024-006

AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA; **AMENDING CHAPTER 28 OF THE CODE OF ORDINANCES ENTITLED "ZONING"; AMENDING ARTICLE V ENTITLED "NONCONFORMING USES" TO CREATE SECTION 28-347 ENTITLED "NONCONFORMING USES CREATED BY GOVERNMENTAL ACQUISITIONS OF PRIVATE PROPERTY"; PROVIDING FOR DEFINITIONS; PROVIDING FOR ADOPTION OF A POLICY AND PROCEDURE CONCERNING NON-CONFORMITIES CREATED BY GOVERNMENTAL ACQUISITION OF PRIVATE PROPERTY INCLUSIVE OF A VARIANCE MECHANISM TO CURE NONCONFORMITIES; PROVIDING THE TOWN MANAGER OR TOWN MANAGER'S DESIGNEE TO TAKE NECESSARY STEPS TO ENFORCE APPLICABLE BUILDING AND SAFETY CODES ON PROPERTIES THAT ARE SUBJECT TO A PENDING GOVERNMENTAL ACQUISITION;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN CODE; PROVIDING FOR AN EFFECTIVE DATE.

Town attorney Horowitz read the ordinance into record.

Vice Mayor Morrissette opened the floor for public comment.

There were no public comments.

A motion was made to adopt Ordinance No. 2024-006 on second and final reading.

ACTION: Clerk Commissioner Hodgkins made a motion to approve ordinance. Acting Clerk Commissioner Kashem seconded the motion, and it passed on a 3-1 poll vote with Commissioner Jacobs opposing.

10 ORDINANCES 1ST READING

10.1 LED Sign Code Amendment - Mayor Mohammed, Planning Consultant Vonder Meulen

ORDINANCE NO. 2024-008
AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA **AMENDING CHAPTER 21 OF THE TOWN'S CODE OF ORDINANCES, ENTITLED "SIGNS AND ADVERTISING;" AMENDING ARTICLE II, ENTITLED "SIGNS" BY AMENDING DIVISION 1, ENTITLED "COMPREHENSIVE REGULATIONS AND REQUIREMENTS"; AMENDING SECTION 21-17 ENTITLED "DEFINITIONS"; SECTION 21-19 ENTITLED "PROHIBITED SIGNS;" PROVIDING AN EXCEPTION TO THE PROHIBITION OF LED LIGHTING; AMENDING SECTION 21-20,**

ENTITLED "PERMANENT SIGNS," TO ALLOW LED LIGHTING ON WINDOWS AND DOORS ON PROPERTIES ENGAGING IN NONRESIDENTIAL USES; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read the ordinance into record.

Vice Mayor Morrissette opened the floor for public comment.

Sybrena Singletary spoke on record and staff were given directive to assist with her building permit costs.

Vice Mayor Morrissette closed the floor for public comment.

Directives were also given for staff to conduct a fee schedule study.

A motion was made to approve Ordinance No. 2024-008 on first reading.

ACTION: Vice Mayor Morrissette made a motion to approve ordinance at first reading. Acting Clerk Commissioner Kashem seconded the motion, and it passed with 4-1 poll vote with Commissioner Jacobs opposing.

10.2 Code Text Amendment - Planning Consultant Vonder Meulen

ORDINANCE NO. 2024-009
AN ORDINANCE OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA; **AMENDING CHAPTER 13.5 "LAND DEVELOPMENT", OF THE TOWN OF PEMBROKE PARK CODE OF ORDINANCES, BY CREATING ARTICLE VIII, TO BE ENTITLED "QUASI-JUDICIAL PROCEEDINGS"; CREATING SECTIONS 13.5-80 THROUGH 13.5-83 OF THE TOWN OF PEMBROKE PARK CODE OF ORDINANCES; ESTABLISHING QUASI-JUDICIAL PROCEDURES FOR PEMBROKE PARK; PROVIDING FOR THE INTENT; PROVIDING FOR DEFINITIONS; IDENTIFYING QUASI-JUDICIAL MATTERS; PROVIDING PROCEDURES FOR QUASI-JUDICIAL PROCEEDINGS, INCLUDING, BUT NOT LIMITED TO, EX PARTE COMMUNICATIONS, NOTIFICATION, PRESENTATION OF EVIDENCE AND PREPARATION OF THE ORDER**; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read the ordinance into record.

Planning Consultant Vonder-Meulen spoke on the record to explain the need to establish a quasi-judicial process.

Town Attorney Horowitz expressed support, citing that the town does not have a written process in place.

Mayor Mohammed opened the floor for public comment.

There were no public comments.

A motion was made to approve Ordinance No. 2024-009 at first reading establishing a quasi-judicial process.

ACTION: Commissioner Jacobs made a motion to approve the ordinance at first reading. Vice Mayor Morrissette seconded the motion, and it passed unanimously on a poll vote.

11 NEW BUSINESS

11.1 SmartCOP RMS System - Interim Police Chief Decoursey, IT Director Pakula

A motion was made to approve the request with an amount not to exceed $197,000.

ACTION: Vice Mayor Morrissette made a motion to approve request. Acting Clerk Commissioner Kashem seconded the motion, and it passed unanimously 5-0 on a poll vote.

11.2 Purchase hardware for the police department - Interim Police Chief Decoursey, IT Director Pakula

A motion was made to approve the request with an amount not to exceed $80,000.

ACTION: Vice Mayor Morrissette made a motion to approve the request. Clerk Commissioner Hodgkins seconded the motion, and it passed 5-0 on a poll vote.

11.3 Change order for built-out for the police department - Interim Police Chief Decoursey, IT Director Pakula

A motion was made to approve with an amount not to exceed $9,000.

ACTION: Vice Mayor Morrissette made a motion to approve. Acting Clerk Commissioner Kashem seconded the motion, and it passed 5-0.

11.4 Police Accreditation - Interim Police Chief Decoursey

A motion was made to approve the contract for the accreditation consultant in the amount of $10,000 per year.

ACTION: Commissioner Jacobs made a motion to approve the contract. Vice Mayor Morrissette seconded the motion, and it passed unanimously on a poll vote.

11.5 Second Amendment for lobbyist contracts - Interim Town Manager Williamson
CAS Government Services
Capital Hills Consulting
Tidewater Consulting
Helmich Consulting

Lobbyist David Sigerson spoke on the record detailing the specialty of the different areas of the lobbyist.

Interim Town Manager Williamson noted that the town is not represented at the local level and recommends that the commission close this gap by considering the addition of a lobbyist at the local level.

A motion was made to approve second amendment to lobbyist contracts of CAS Government Services, Capital Hills Consulting, Tidewater Consulting and Helmich Consulting.

ACTION: Commissioner Jacobs made a motion to approve the second amendment for lobbyist contracts for CAS Government Services, Capital Hills Consulting, Tidewater Consulting and Helmich Consulting. Acting Clerk Commissioner Kashem seconded the motion, and it passed by a unanimous 5-0 poll vote.

11.6 ILA Yard Waste and Hazardous Material Disposal - Interim Town Manager Williamson

A motion was made to approve the interlocal agreement yard waste and hazardous material disposal.

ACTION: Commissioner Jacobs Made a motion to approve the interlocal agreement. Acting Clerk Commissioner Kashem seconded the motion, and it passed 4-0.

11.7 All Liquid Environment Contract - Interim Town Manager Williamson

A motion was made to renew All Liquid Environment contract.

ACTION: Commissioner Jacobs made a motion to approve. Acting Clerk Commissioner Kashem, seconded the motion, and it passed 4-0.

11.8 Third Amendment Disaster Debris Removal - Interim Town Manager Williamson

A motion was made to approve the third amendment to extend the disaster debris removal contract.

ACTION: Commissioner Jacobs made a motion to approve. Acting Clerk Commissioner Kashem seconded the motion, and it passed 4-0.

11.9 ILA SW 25 Avenue Project - Interim Town Manager Williamson

RESOLUTION NO. 2024-021
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, APPROVING AND AUTHORIZING EXECUTION OF THE INTERLOCAL AGREEMENT WITH BROWARD COUNTY FOR SURTAX-FUNDED MUNICIPAL TRANSPORTATION PROJECT: CONSTRUCTION OF STORMWATER IMPROVEMENTS PHASE II (PPRK-002); PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

A motion was made to approve interlocal agreement for SW 25 Avenue project and Resolution No. 2024-021.

ACTION: Commissioner Jacobs made a motion to approve the resolution. Acting Clerk Commissioner Kashem seconded the motion, and it passed 4-0.

12 DISCUSSION

12.1 Moratorium on Self-Storage Facilities - Mayor Mohammed

Planning Consultant Vonder-Meulen stated that the town currently has seven storage locations.

Mayor Mohammed presented documentation and articles from other municipalities that are establishing moratoriums on storage businesses.

A directive was given for the Town Attorney to provide an ordinance at the next meeting.

12.2 Legal Fees for Mayor Mohammed - Mayor Mohammed

Item removed from the agenda.

12.3 Citizenship Drive - Mayor Mohammed

A directive was given to forward this item to the next workshop.

12.4 Town Manager - Vice Mayor Morrissette

A discussion took place about hiring a town manager according to the process approved in January, taking into consideration the selection by Consultant Norlock and the inclusion of Interim Town Manager Williamson.

Commissioner Jacobs voted for David Lynch.
Acting Clerk Commissioner Kashem voted for Chandler Williamson.
Clerk Commissioner Hodgkins voted for David Lynch.
Vice Mayor Morrissette voted for David Lynch.

The Commission directed HR staff to proceed with offering the position to Mr. Lynch and negotiating a contract.

12.5 Compensation for Aleem Ghany - Clerk Commissioner Hodgkins

A discussion took place regarding past practices and how a previous employee received compensation for retroactive duties. No final decision was made regarding compensation for Mr. Ghany.

13 ATTORNEY REPORTS

Town Attorney Horowitz provided the Commission with an update on the cases they are representing and the attorney services provided by the Florida Municipal Insurance Trust.

Babette Friedman
Melissa Anderson
Josephine Sapero's slip and fall
Settlement by FMIT
Chris McKine
Joseline Ramirez
ABC Recycling
Collective Bargaining Unit for the Police Department

14 TOWN CLERK COMMENTS

Town Clerk Martell requested to speak on the record, and the request was granted by Vice Mayor Morrissette.

Town Clerk Martell stated for the record that the approved tentative budget would cripple the department's ability to remain in compliance with the OIG and the Florida Department of State Division of Library and Information Services. The tentative budget recommends outsourcing the position, but a company will not provide the proper destruction documents required by the state. For the record, without staff, the Town Clerk stated she would be unable to keep up with the work in the department.

Interim Town Manager rebutted, recommending that outsourcing would be more cost-effective and a modern way of scanning, compared to the current scanning system.

Vice Mayor Morrissette stated that it was his understanding that the Clerk's budget had been reinstated and that the finance consultant could amend the budget.

Commissioner Hodgkins stated that he had not been informed of the changes to his budget and that he wanted his budget to be reinstated.

No direction was given, but the Interim Town Manager stated that he supports the Clerk's office and wants it to be successful.

15 TOWN MANAGER REPORTS

The Interim Town Manager did not have a report but indicated that he would provide one in the future. He will revisit the Clerk's budget because he wants the Clerk's office to succeed.

16 COMMISSION REPORTS

16.1 Commissioner Jacobs – He stated that he is the one responsible for improving the Town and that the Commissioners are being influenced by the Town Clerk and the Mayor. He also mentioned that while the storage area was a disaster, it had cost over $400,000 to organize, which he believes was not cost-effective.

Acting Clerk Commissioner Kashem – NONE

Clerk Commissioner Hodgkins – NONE

Vice Mayor Morrissette – NONE

Mayor Mohammed left the meeting at 9:15 PM

17 ANNOUNCEMENTS

17.1 Special Magistrate Hearing, Wednesday, September 18th at 9:00 AM
Final Budget Hearing, Wednesday, September 25th at 6:00 PM
Workshop Commission meeting, Wednesday, September 25th at 7:00 PM

18 ADJOURNMENT

With no further town business, the meeting adjourned at 10:25 p.m.

ATTEST:

_____
Cynthia Garcia-Lima, Town Clerk
Commission approved on:

In accordance with the provisions of F.S. Section 286.0105, should any person seek to appeal any decision made by the Commission with respect to any matter considered at this meeting, such person will need to ensure that a verbatim record of the proceedings is made; which record includes the testimony and evidence upon which the appeal is to be based.

Any person requiring auxiliary aids and services at this meeting may call the Town Clerks Office at 954-966-4600 at least two calendar days prior to the meeting. If you are hearing or speech impaired please contact the Florida Relay Services by using the following numbers: 1-800-955-8770 (voice) or 1-800-955-8771 (tdd).

DECORUM - All comments must be addressed to the Commission as a body and not to individuals. Any person making impertinent or slanderous remarks, or who becomes boisterous while addressing the Commission, shall be barred from further audience before the Commission by the presiding officer, unless permission to continue or again address the commission is granted by the majority vote of the Commission members present. No clapping, applauding, heckling or verbal outbursts in support or in

opposition to a speaker or his/her remarks shall be permitted. No signs or placards shall be allowed in the Commission Chambers. Please mute or turn off your cell phone or pager at the start of the meeting. Failure to do so may result in being barred from the meeting. Persons exiting the Chamber shall do so quietly.

MINUTES
BUDGET HEARING MEETING

6:00 PM - Wednesday, September 25, 2024
Commission Chambers

The BUDGET HEARING MEETING of the Town of Pembroke Park was called to order on Wednesday, September 25, 2024, at 6:00 PM, in the Commission Chambers, with the following members present:

PRESENT: Mayor Ashira Mohammed; Vice Mayor Erik Morrissette; Clerk Commissioner William Hodgkins; Acting Clerk Commissioner Musfika Kashem; and Commissioner Geoffrey Jacobs

EXCUSED:

1 CALL TO ORDER
Vice Mayor Morrissette called the meeting to order at 6:02 p.m.

2 PLEDGE OF ALLEGIANCE
Led by Vice Mayor and Commissioners

3 ROLL CALL
Present at the meeting were Ashira Mohammed, Mayor; Erik Morrissette, Vice Mayor; William Hodgkins, Clerk Commissioner; Musfika Kashem, Acting Clerk Commissioner; and Geoffrey Jacobs, Commissioner.

Additional Staff in attendance were Chandler Williamson, Town Manager; Jacob Horowitz, Town Attorney; Suzi Reutlinger, Contract/Purchasing Manager; Mark Pakula, Information Technology Director; Jason Ochoa, Deputy Chief of Police; James Davermann, Finance Director; David Dilena, Finance Consultant; Osmanny Larzabal, Deputy Public Services Director; Kevin Linkous, Horticulture/ Agriculture Community Garden; Kristen Biazar, HR Consultant; John Muller

4 DELETIONS OR WITHDRAWALS TO THE AGENDA
There were no deletions or withdrawals to the agenda.

5 PRESENTATIONS / PROCLAMATIONS
There were no presentations or proclamations.

6 PUBLIC COMMENTS RELATED TO AGENDA ITEMS / GOOD & WELFARE

There were no public comments.

7 RESOLUTIONS

1) Final Millage Rate - Interim Town Manager Williamson, Finance Consultant DiLena

RESOLUTION NO. 2024–019

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **ADOPTING A FINAL MILLAGE RATE OF 8.5000 MILS FOR THE TOWN'S GENERAL OPERATING FUNDS FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2024, AND ENDING SEPTEMBER 30, 2025; PROVIDING THAT THE FINAL MILLAGE RATE OF 8.5000 MILS IS 7.1900 PERCENT GREATER THAN THE COMPUTED ROLLED BACK RATE OF 7.9296 MILS;** PROVIDING FOR SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE

MAYOR MOHAMMED OPENED THE FLOOR FOR PUBLIC COMMENT

There were no public comments.

MAYOR MOHAMMED CLOSED THE FLOOR FOR PUBLIC COMMENT

A MOTION TO ADOPT RESOLUTION 2024-019 WAS MADE.

MOTION TO APPROVE MADE BY COMMISSIONER GEOFFREY JACOBS, SECONDED BY CLERK COMMISSIONER WILLIAM HODGKINS. MOTION PASSED 4-0.

2) Adoption of Budget - Interim Town Manager Williamson, Finance Consultant DiLena

RESOLUTION NO. 2024-020

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **ADOPTING A FINAL BUDGET FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2024 AND ENDING SEPTEMBER 30, 2025, ATTACHED HERETO AS EXHIBIT "A;" DETERMINING AND FIXING THE AMOUNTS NECESSARY TO CARRY ON THE GOVERNMENT OF THE TOWN FOR THE ENSUING YEAR;** PROVIDING FOR SEVERABILITY; PROVIDING

MAYOR MOHAMMED OPENED THE FLOOR FOR PUBLIC COMMENT
There were no public comments.
MAYOR MOHAMMED CLOSED THE FLOOR FOR PUBLIC COMMENT

A MOTION TO ADOPT RESOLUTION 2024-020 WAS MADE.

MOTION TO APPROVE MADE BY COMMISSIONER GEOFFREY JACOBS, SECONDED BY CLERK COMMISSIONER WILLIAM HODGKINS. MOTION PASSED 4-0.

8 DISCUSSION

There were no discussion items.

9 COMMISSION REPORTS

There were no commission reports.

10 ATTORNEY REPORTS

There were no attorney reports.

11 TOWN MANAGER REPORTS

There were no town manager reports.

12 ADJOURNMENT

With no further business meeting adjourned at 6:08 p.m.

Commission approved on:
ATTEST:

_____
Cynthia Garcia-Lima, Town Clerk

IN ACCORDANCE WITH THE PROVISIONS OF F.S. SECTION 286.0105, IF A PERSON DECIDES TO APPEAL ANY DECISION MADE BY THE BOARD, AGENCY, OR COMMISSION WITH RESPECT TO ANY MATTER CONSIDERED AT THIS MEETING OR HEARING, HE OR SHE WILL NEED A RECORD OF THE PROCEEDINGS, AND, FOR SUCH PURPOSE, HE OR SHE MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE, WHICH RECORD INCLUDES THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

ANY PERSON REQUIRING AUXILIARY AIDS AND SERVICES AT THIS MEETING MAY CALL THE TOWN CLERKS OFFICE AT 954-966-4600 AT LEAST TWO CALENDAR DAYS PRIOR TO THE MEETING. IF YOU ARE HEARING OR SPEECH IMPAIRED PLEASE CONTACT THE FLORIDA RELAY SERVICES BY USING THE FOLLOWING NUMBERS: 1-800-955-8770 (VOICE) OR 1-800-955-8771 (TDD)

DECORUM - ALL COMMENTS MUST BE ADDRESSED TO THE COMMISSION AS A BODY AND NOT TO INDIVIDUALS. ANY PERSON MAKING IMPERTINENT OR SLANDEROUS REMARKS, OR WHO BECOMES BOISTEROUS WHILE ADDRESSING THE COMMISSION, SHALL BE BARRED FROM FURTHER AUDIENCE BEFORE THE COMMISSION BY THE PRESIDING OFFICER, UNLESS PERMISSION TO CONTINUE OR AGAIN ADDRESS THE COMMISSION IS GRANTED BY THE MAJORITY VOTE OF THE COMMISSION MEMBERS PRESENT. NO CLAPPING, APPLAUDING, HECKLING OR VERBAL OUTBURSTS IN SUPPORT OR IN OPPOSITION TO A SPEAKER OR HIS/HER REMARKS SHALL BE PERMITTED. NO SIGNS OR PLACARDS SHALL BE ALLOWED IN THE COMMISSION CHAMBERS. PLEASE MUTE OR TURN OFF YOUR CELL PHONE OR PAGER AT THE START OF THE MEETING. FAILURE TO DO SO MAY RESULT IN BEING BARRED FROM THE MEETING. PERSONS EXITING THE CHAMBER SHALL DO SO QUIETLY.

Cynthia Garcia-Lima
Town Clerk

MINUTES
WORKSHOP COMMISSION MEETING

7:00 PM - Wednesday, September 25, 2024
Commission Chambers

The WORKSHOP COMMISSION MEETING of the Town of Pembroke Park was called to order on Wednesday, September 25, 2024, at 7:00 PM, in the Commission Chambers, with the following members present:

PRESENT: Mayor Ashira Mohammed; Vice Mayor Erik Morrissette; Clerk Commissioner William Hodgkins; Acting Clerk Commissioner Musfika Kashem; and Commissioner Geoffrey Jacobs

EXCUSED:

1 CALL TO ORDER
Mayor Mohammed called the meeting to order at 7:07PM.

2 PLEDGE OF ALLEGIANCE
Led by Mayor Mohammed and Commissioners.

A moment of silence was observed for Meg, an employee who worked at the Town for 34 years as an Executive Assistant and has recently passed away.

3 ROLL CALL
The meeting was called to order at 7:07 pm by Mayor Mohammed. Present at the meeting were Ashira Mohammed, Mayor; Erik Morrissette, Vice Mayor; William Hodgkins, Clerk Commissioner; Musfika Kashem, Acting Clerk Commissioner; and Geoffrey Jacobs, Commissioner.

Additional Staff in attendance were Chandler Williamson, Town Manager; Jacob Horowitz, Town Attorney; Suzi Reutlinger, Contract/Purchasing Manager; Mark Pakula, Information Technology Director; Jason Ochoa, Deputy Chief of Police; James Davermann, Finance Director; David Dilena, Finance Consultant; Osmanny Larzabal, Deputy Public Services Director; Kevin Linkous, Horticulture/ Agriculture Community Garden; Kristen Biazar, HR Consultant; John Muller

4 DELETIONS OR WITHDRAWALS TO THE AGENDA

There were no deletions, withdrawals to the agenda.

PUBLIC COMMENTS:

David Bouganim, a resident of the Town, came forward and addressed the Commission.

Mayor Mohammed asked Interim Town Manager Williamson to schedule a meeting with Mr. Bouganim to address the issues.

5 NEW BUSINESS

5.1 Moratorium on Self-Storage Facilities - Mayor Mohammed

ORDINANCE NO.___

AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA, AMENDING CHAPTER 13.5, ENTITLED "LAND DEVELOPMENT; "AMENDING ARTICLE IV, ENTITLED "LAND USE REQUIREMENT / IMPLEMENTATION" BY CREATING SECTION 13.5-43, TO BE ENTITLED "ZONING IN PROGRESS;" ESTABLISHING AN ADMINISTRATIVE AND LEGISLATIVE PROCEDURE WHEREBY THE TOWN MAY PLACE A TEMPORARY HOLD ON THE ISSUANCE OF DEVELOPMENT PERMITS AND APPROVALS; PROVIDING FOR APPLICABILITY; PROVIDING FOR ZONING IN PROGRESS PROCEDURES; PROVIDING FOR TOWN COMMISSION REVIEW; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Line Item.

Town Attorney Horowitz is to verify if there is a moratorium on self-storage and report back to the Commission at the regular meeting on October 9, 2024.

5.2 Maintenance Memorandum of Agreement (MMOA) - Interim Town Manager Williamson

RESOLUTION NO. 2024-022

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, APPROVING AND AUTHORIZING EXECUTION OF THE LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT BETWEEN THE TOWN AND THE FLORIDA DEPARTMENT OF TRANSPORTATION, ATTACHED HERETO AS EXHIBIT "A;" PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

The item was placed on consent agenda for the next regular commission meeting.

6 OLD BUSINESS

6.1 Commercial Amnesty Program - Mayor Mohammed, Town Attorney Horowitz

RESOLUTION NO. 2024-014

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **PROVIDING FOR THE AMNESTY PROGRAM GUIDELINES FOR COMMERCIAL PROPERTY OWNERS WHO PERFORMED WORK WITHOUT PERMITS TO FACILITATE BRINGING PROPERTY INTO COMPLIANCE THROUGH JANUARY 31, 2026;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

Line Item.
The Commission instructed the Interim Town Manager to consult with the Finance Department and conduct research, providing suggestions for the Commission.

7 DISCUSSION

7.1 Citizenship Drive - Mayor Mohammed
Tentative date is October 19th

For informational purposes, this drive will be held in conjunction with St. Thomas University School of Law and the Trinidad Consulate General, with an invitation extended to the Jamaican Consulate General.

7.2 Code Enforcement Manager Software - Mayor Mohammed
Direct staff to research a transparency portal software to upload code cases.

IT Director Pakula is to review the previous software and report back to the Commission.

7.3 Code of Ordinance - Mayor Mohammed
Direct staff to review and update to be in line with other municipalities.
https://library.municode.com/fl/pembroke_park/codes/code_of_ordinances

Mayor Mohammed would like staff to begin reviewing the Town's ordinances and updating them. Town Attorney Horowitz is to review the updates.

7.4 Agenda Rules - Mayor Mohammed
Enforcement of Ordinance 2023-005

The Commission discussed the item. They requested additional clarification on certain items listed on the agenda.

7.5 Ongoing blackmail and misconduct between Mayor Ashira Mohammed and Town Clerk Marlin Martel – Commissioner Geoffrey Jacobs

The item was tabled. Commissioner Jacobs informed the commission that he is still awaiting the supporting materials.

7.6 Discussion and possible action regarding a finding of entitlement and the payment of Commissioner Jacobs' attorney's fees related to the dismissal of criminal charges - Town Attorney Horowitz

Line item.
Mayor Mohammed informed the commission that she will be abstaining from any discussion related to this item.

8 TOWN CLERK COMMENTS

8.1 Housekeeping items, minutes - Town Clerk Martell
07 09 2024 (REVISED)
06 14 2023 UNAPPROVED
07 12 2023 UNAPPROVED
07 12 2023 UNAPPROVED
Resignation

The minutes were to be placed on the consent agenda for the next regular commission meeting.

It was the consensus of the Commission to accept the Town Clerk's letter of resignation.

9 ATTORNEY COMMENTS

9.1 Town Manager Offer Update (HR)

Line Item.

HR Consultant Kristen Biazar and John Mullen spoke on record. The Commission moved forward with the David Lynch contract.

Mayor Mohammed informed HR that she would like to proceed with the provision on bridging time, and the item will be placed as a line item on the next meeting agenda.

Workplace harassment, sexual harassment, and hostile work environment trainings will be addressed. An annual in-person anti-harassment training will be held for all employees.

10 TOWN MANAGER COMMENTS

Interim Manager Williamson informed the Commission that the new Town Manager will be presenting a full report at the next meeting. Broward County schools have closed due to the hurricane, and many municipalities are permitting staff with childcare challenges to work remotely tomorrow. The town will follow the same approach.

11 COMMISSIONER COMMENTS

11.1 Commissioner Jacobs – none.
Acting Clerk Commissioner Kashem – none.
Clerk Commissioner Hodgkins – none.
Vice Mayor Morrissette – thanked the Town Clerk for her services.
Mayor Mohammed – She informed the public that Broward and Palm Beach County Schools are closed tomorrow, and the Miami-Dade County Schools will remain open. She concluded by wishing everyone stays safe and dry.

12 ANNOUNCEMENTS

12.1 Regular Commission Meeting, Wednesday, October 9th, at 7:00 PM
Special Magistrate Hearing, Wednesday, October 16th, at 9:00 AM
Workshop Commission Meeting, Wednesday, October 23rd, 6:00 PM

13 ADJOURNMENT

With no further town business, the meeting was adjourned at 8:21 PM.

ATTEST:

_____

Cynthia Garcia-Lima, Town Clerk
Commission approved on:

In accordance with the provisions of F.S. Section 286.0105, should any person seek to appeal any decision made by the Commission with respect to any matter considered at this meeting, such person will need to ensure that a verbatim record of the proceedings is made; which record includes the testimony and evidence upon which the appeal is to be based.

Any person requiring auxiliary aids and services at this meeting may call the Town Clerks Office at 954-966-4600 at least two calendar days prior to the meeting. If you are hearing or speech impaired please contact the Florida Relay Services by using the following numbers: 1-800-955-8770 (voice) or 1-800-955-8771 (TDD)

DECORUM - All comments must be addressed to the Commission as a body and not to individuals. Any person making impertinent or slanderous remarks, or who becomes boisterous while addressing the Commission, shall be barred from further audience before the Commission by the presiding officer, unless permission to continue or again address the commission is granted by the majority vote of the Commission members present. No clapping, applauding, heckling or verbal outbursts in support or in opposition to a speaker or his/her remarks shall be permitted. No signs or placards shall be allowed in the Commission Chambers. Please mute or turn off your cell phone or pager at the start of the meeting. Failure to do so may result in being barred from the meeting. Persons exiting the Chamber shall do so quietly.

MINUTES REGULAR COMMISSION MEETING

7:00 PM - Tuesday, October 15, 2024
Commission Chambers

The REGULAR COMMISSION MEETING of the Town of Pembroke Park was called to order on Tuesday, October 15, 2024, at 7:00 PM, in the Commission Chambers, with the following members present:

PRESENT: Mayor Ashira Mohammed; Vice Mayor Erik Morrissette; Clerk Commissioner William Hodgkins; Acting Clerk Commissioner Musfika Kashem; and Commissioner Geoffrey Jacobs

EXCUSED:

1 CALL TO ORDER

Mayor Mohammed called the meeting to order at 7:03pm

2 PLEDGE OF ALLEGIANCE

3 ROLL CALL

Additional staff in attendance were Chandler Williamson, Town Manager; Suzi Reutlinger, Contracts Procurement Manager, Acting Town Clerk; Daniel Decoursey, Interim Police Chief; Jacob Horowitz, Town Attorney; Osmanny Larzabal, Deputy Public Services Director; Jason Ochoa, Deputy Police Chief, and HR Consultant Kristen Biazar

4 DELETIONS OR WITHDRAWALS TO THE AGENDA

None

5 PRESENTATIONS / PROCLAMATIONS

5.1 Proclamation - Grants for Safe School Day Oct 2024

Proclamation read into record.

6 PUBLIC COMMENTS RELATED TO AGENDA ITEMS / GOOD & WELFARE

Iramed Silverio came forward and addressed the commission.
Robert Janzer came forward and addressed the commission.
David Roach came forward and addressed the commission.

At Commissioner Jacobs' request, the Town Attorney was asked to read on the record the provision on the agenda and the relevant section of the Town Code, Section 2-45, which addresses Decorum.

7 CONSENT AGENDA

7.1 Housekeeping items, minutes - Town Clerk Martell
07 09 2024 (REVISED)
06 14 2023 UNAPPROVED
07 12 2023 UNAPPROVED
07 12 2023 UNAPPROVED

7.2 Maintenance Memorandum of Agreement (MMOA) - Interim Town Manager Williamson
RESOLUTION NO. 2024-022
A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, APPROVING AND AUTHORIZING EXECUTION OF THE LANDSCAPE MAINTENANCE MEMORANDUM OF AGREEMENT BETWEEN THE TOWN AND THE FLORIDA DEPARTMENT OF TRANSPORTATION, ATTACHED HERETO AS EXHIBIT "A;" PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

A MOTION TO APPROVE THE CONSENT AGENDA WAS MADE.
MOTION TO APPROVE MADE BY CLERK COMMISSIONER WILLIAM HODGKINS, SECONDED BY VICE MAYOR ERIK MORRISSETTE. MOTION PASSED 5-0.

8 RESOLUTIONS

There were no resolutions.

9 ORDINANCES, 2ND READING

9.1 LED Sign Code Amendment - Mayor Mohammed, Planning Consultant Vonder Meulen
ORDINANCE NO. 2024-008
AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA **AMENDING CHAPTER 21 OF THE TOWN'S CODE OF ORDINANCES,**

ENTITLED "SIGNS AND ADVERTISING;" AMENDING ARTICLE II, ENTITLED "SIGNS" BY AMENDING DIVISION 1, ENTITLED "COMPREHENSIVE REGULATIONS AND REQUIREMENTS"; AMENDING SECTION 21-17 ENTITLED "DEFINITIONS"; SECTION 21-19 ENTITLED "PROHIBITED SIGNS;" PROVIDING AN EXCEPTION TO THE PROHIBITION OF LED LIGHTING; AMENDING SECTION 21-20, ENTITLED "PERMANENT SIGNS," TO ALLOW LED LIGHTING ON WINDOWS AND DOORS ON PROPERTIES ENGAGING IN NONRESIDENTIAL USES; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read the ordinance into record.

Mayor Mohammed opened the floor for public comment.

Iramed Silverio came forward and addressed the Council.

Mayor Mohammed closed the floor for public comment.

MOTION TO APPROVE ORDINANCE 2024-008
MOTION TO APPROVE MADE BY ACTING CLERK COMMISSIONER MUSFIKA KASHEM, SECONDED BY CLERK COMMISSIONER WILLIAM HODGKINS. MOTION PASSED 5-0.

9.2 Code Text Amendment - Planning Consultant Vonder Meulen
ORDINANCE NO. 2024-009
AN ORDINANCE OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA; **AMENDING CHAPTER 13.5 "LAND DEVELOPMENT", OF THE TOWN OF PEMBROKE PARK CODE OF ORDINANCES, BY CREATING ARTICLE VIII, TO BE ENTITLED "QUASI-JUDICIAL PROCEEDINGS"; CREATING SECTIONS 13.5-80 THROUGH 13.5-83 OF THE TOWN OF PEMBROKE PARK CODE OF ORDINANCES; ESTABLISHING QUASI-JUDICIAL PROCEDURES FOR PEMBROKE PARK; PROVIDING FOR THE INTENT; PROVIDING FOR DEFINITIONS; IDENTIFYING QUASI-JUDICIAL MATTERS; PROVIDING PROCEDURES FOR QUASI-JUDICIAL PROCEEDINGS, INCLUDING, BUT NOT LIMITED TO, EX PARTE COMMUNICATIONS, NOTIFICATION, PRESENTATION OF EVIDENCE AND PREPARATION OF THE ORDER**; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read the ordinance into record.

Mayor Mohammed opened the floor for public comment.

There were no public comments.

Mayor Mohammed closed the floor for public comment.

MOTION TO APPROVE ORDINANCE NO. 2024-009
MOTION TO APPROVE MADE BY CLERK COMMISSIONER WILLIAM HODGKINS, SECONDED BY VICE MAYOR ERIK MORRISSETTE. MOTION PASSED 5-0.

10 NEW BUSINESS

10.1 Moratorium on Self-Storage Facilities - Mayor Mohammed
ORDINANCE NO.2024-010
AN ORDINANCE OF THE TOWN OF PEMBROKE PARK, FLORIDA, AMENDING CHAPTER 13.5, ENTITLED "LAND DEVELOPMENT;"AMENDING ARTICLE IV, ENTITLED "LAND USE REQUIREMENT / IMPLEMENTATION" BY CREATING SECTION 13.5-43, TO BE ENTITLED "ZONING IN PROGRESS;" ESTABLISHING AN ADMINISTRATIVE AND LEGISLATIVE PROCEDURE WHEREBY THE TOWN MAY PLACE A TEMPORARY HOLD ON THE ISSUANCE OF DEVELOPMENT PERMITS AND APPROVALS; PROVIDING FOR APPLICABILITY; PROVIDING FOR ZONING IN PROGRESS PROCEDURES; PROVIDING FOR TOWN COMMISSION REVIEW; PROVIDING FOR CODIFICATION; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

Town Attorney Horowitz read the ordinance into record.

Mayor Mohammed opened the floor for public comment.

There were no public comments.

Mayor Mohammed closed the floor for public comment.

MOTION TO APPROVE ORDINANCE NO 2024-010
MOTION TO APPROVE MADE BY COMMISSIONER GEOFFREY JACOBS, SECONDED BY CLERK COMMISSIONER WILLIAM HODGKINS. MOTION PASSED 5-0.

10.2 Service Recognition (Bridging) - Human Resources Consultant Biazar

The Commission discussed, and it was the consensus that the policy would not be adopted.

10.3 Town Manager Recruitment Update - Human Resources Consultant Biazar

Background check still pending
MOTION TO APPROVE CONTRACT FOR MR. DAVID LYNCH
MOTION TO APPROVE MADE BY COMMISSIONER GEOFFREY JACOBS, SECONDED BY VICE MAYOR ERIK MORRISSETTE. MOTION PASSED 3-2 MAYOR ASHIRA MOHAMMED AND ACTING CLERK COMMISSIONER MUSFIKA KASHEM OPPOSED.

11 OLD BUSINESS

11.1 Commercial Amnesty Program - Mayor Mohammed, Town Attorney Horowitz

RESOLUTION NO. 2024-014

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, **PROVIDING FOR THE AMNESTY PROGRAM GUIDELINES FOR COMMERCIAL PROPERTY OWNERS WHO PERFORMED WORK WITHOUT PERMITS TO FACILITATE BRINGING PROPERTY INTO COMPLIANCE THROUGH JANUARY 31, 2026;** PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

Town Attorney Horowitz read the resolution into record.

MOTION TO ADOPT RESOLUTION 2024-014 FOR SMALL BUSINESSES THAT HAVE LESS THAN TEN (10) EMPLOYEES
MOTION TO APPROVE MADE BY VICE MAYOR ERIK MORRISSETTE, SECONDED BY CLERK COMMISSIONER WILLIAM HODGKINS. MOTION PASSED 4-1 COMMISSIONER GEOFFREY JACOBS OPPOSED.

12 DISCUSSION

12.1 Discussion and possible action regarding a finding of entitlement and the payment of Commissioner Jacobs' attorney's fees related to the dismissal of criminal charges - Town Attorney Horowitz

Mayor Mohammed and Commissioner Jacobs advised they will be abstaining from voting on the matter and will be filing the exemption forms.

MOTION TO DENY
MOTION TO DENY MADE BY CLERK COMMISSIONER WILLIAM HODGKINS, SECONDED BY VICE MAYOR ERIK MORRISSETTE. MOTION PASSED 3-0.

13 ATTORNEY REPORTS

The Town Attorney reminded the Commission that he will be offering ethics training.

14 TOWN MANAGER REPORTS

Interim Town Manager Williamson stated that the Janitorial and Debris Removal RFPs have been completed and will present recommendations to the commission at the next workshop. The bid for SW 25th Street is set to go out in mid-November.

An RFP for audit services will be drafted, and a request was made for one commissioner to serve on the committee.

The Interim Town Manager requested the cancellation of the Beta Jones contract, and a consensus was reached to proceed with the cancellation. Commissioner Kashem and the Town Manager will meet before the termination, and the item will be brought back to the workshop. Williamson noted that the town currently has capable in-house staff to complete the park project.

The Town Clerk position is currently being advertised, and the town is also seeking a Public Service Department Manager, with plans to bring this matter back to the workshop.

15 COMMISSION REPORTS

Commissioner Jacobs - comments regarding court date(s).
Acting Clerk Commissioner Kashem - None
Clerk Commissioner Hodgkins - comments regarding threats received.
Vice Mayor Morrissette - empathized with Commissioner Hodgkins.
Mayor Mohammed - comments regarding Commissioner Jacobs actions in victimizing and bullying people at town.

16 ANNOUNCEMENTS

16.1 Special Magistrate Hearing, Wednesday, October 16th, at 9:00 AM
Workshop Commission Meeting, Wednesday, October 23rd, 6:00 PM
CALENDAR OF EVENTS:
Fall Festival, Friday, October 18th, 4:00PM to 7:00 PM
Citizenship Drive, Saturday October 26th at Town Hall from 10AM to 2pm
Health Fair, Saturday, November 2, 2024
Thanksgiving Giveaway, Monday, November 25th
Toy Giveaway, Thursday, December 19th

17 ADJOURNMENT

With no further Town business, the meeting adjourned at 8:52pm

ATTEST:

_____

Cynthia Garcia-Lima, Town Clerk
Commission approved on:

In accordance with the provisions of F.S. Section 286.0105, should any person seek to appeal any decision made by the Commission with respect to any matter considered at this meeting, such person will need to ensure that a verbatim record of the proceedings is made; which record includes the testimony and evidence upon which the appeal is to be based.

Any person requiring auxiliary aids and services at this meeting may call the Town Clerks Office at 954-966-4600 at least two calendar days prior to the meeting. If you are hearing or speech impaired please contact the Florida Relay Services by using the following numbers: 1-800-955-8770 (voice) or 1-800-955-8771 (tdd).

DECORUM - All comments must be addressed to the Commission as a body and not to individuals. Any person making impertinent or slanderous remarks, or who becomes boisterous while addressing the Commission, shall be barred from further audience before the Commission by the presiding officer, unless permission to continue or again address the commission is granted by the majority vote of the Commission members present. No clapping, applauding, heckling or verbal outbursts in support or in opposition to a speaker or his/her remarks shall be permitted. No signs or placards shall be allowed in the Commission Chambers. Please mute or turn off your cell phone or pager at the start of the meeting. Failure to do so may result in being barred from the meeting. Persons exiting the Chamber shall do so quietly.

Agenda Item Report

Subject:	Invoices exceeding $500.00 - Mayor Mohammed
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	Ashira Mohammed, Mayor
Dept/Group:	Administrative
Recommendation for Counsel to consider:	
Background Information:	Workshop all invoices exceeding $500.00, as per past practice of receiving a monthly list of such expenses.
Staff Recommendations:	
Financial Implications:	
Alternatives:	

Agenda Item Report

Subject:	VIA Actuarial Solutions Engagement Letter
Meeting Date:	WORKSHOP COMMISSION MEETING - Jan 08 2025
Prepared For:	Town Commission
Staff Contact:	
Dept/Group:	Administrative
Recommendation for Counsel to consider:	
Background Information:	
Staff Recommendations:	The Town Attorney has reviewed the engagement letter and prepared the attached addendum to go along with the engagement letter. Also included is a resolution providing for a waiver of procurement, as required by code.
Financial Implications:	
Alternatives:	

ATTACHMENTS:

Engagement Letter_Pembroke Park_2024
Addendum (VIA Actuarial)
Proposed Resolution

VIA ACTUARIAL SOLUTIONS

October 28, 2024

Ashira Mohammed
Town of Pembroke Park, Florida
3150 SW 52nd Ave
Pembroke Park, FL 33023

Re: **Engagement Letter for Actuarial Services**

Thank you for this opportunity to provide actuarial and consulting services to the Town of Pembroke Park, Florida. This letter and attachments (collectively, the "Agreement") document the Scope of Services ("Services") that Northern Consulting Actuaries, Inc. d/b/a VIA Actuarial Solutions (hereafter, "VIA" or "we" or "our") will provide to the Town of Pembroke Park, Florida. (hereafter "Pembroke Park" or "you" or "yours" or "Client") and the Town of Pembroke Park's Pension Plan (hereafter "Plan"). It also describes our fees, expenses, and the Terms and Conditions for those services.

After reviewing the enclosed Scope of Services and Terms and Conditions, please sign and date the Acknowledgement and Consent form. Future services will be provided under this same engagement letter for a fee agreed to by both parties, or we can provide an updated engagement letter if you prefer.

Please feel free to contact us if you have any questions about the proposed engagement. We will commence work under this engagement upon receipt of a signed copy of this Agreement.

Thank you again for choosing VIA Actuarial Solutions to be your trusted actuarial consultant.

Sincerely,

Scott Striegel, FSA, EA, MAAA
Consulting Actuary

L/D/C/R: 3/ses/mws

Scope of Services

Our proposed scope of services and related fees are outlined below.

Fixed Fee Services	Fixed Fee
FY2024 actuarial valuation, including calculation of 2024 actuarially determined contribution, accounting results under ASC 960 and GASB 68, and Florida Statute 112.64 reporting	**$6,700**

Other Consulting Services (Upon Request)	Fee
Actuarial review meetings (videoconference)	$500
Other consulting projects	Hourly rates

Out-of-scope and consulting projects will be billed based on the time and expense needed to complete these projects or for a fixed fee agreed upon by both parties. For calendar year 2024, our hourly rates are $150 to $250 for actuarial analysts and managers and $350 to $400 for consulting actuaries. We are glad to estimate fees for additional projects as requested. Out-of-scope projects may include time spent on:

- meetings and preparation,
- significant changes in your plan, accounting, or funding arrangements, and
- cleanup of inaccurate data or data not provided in the form requested.

The annual fees and hourly rates stated in this engagement letter are subject to annual inflationary updates beginning in 2025 and each year thereafter. VIA will propose inflationary adjustments to the Plan before beginning work on subsequent valuations. The hourly rate schedule is updated automatically each calendar year.

The proposed fees assume no substantial changes to the plan census, assumptions, plan provisions, or funding arrangement. If any of these factors change significantly then we will provide a separate proposed fee.

Out-of-pocket expenses will be passed on to you without markup. Bills are sent as often as monthly, and your payment is due within 30 days of the invoice date. Interest will accrue on the unpaid balance at the rate of ½% per month. If we receive your payment within 30 days, the interest will be waived.

Terms and Conditions

COOPERATION AND WARRANTY REGARDING DOCUMENTS AND INFORMATION. You understand that in order for us to provide the Services to you we will require your assistance and cooperation. You agree to provide us with all documents and information reasonably requested by us in order for us to perform the Services and you warrant that such documents and information are true and accurate to the best of your knowledge after due inquiry. We will not be liable for any inaccurate results of our Services due to our reliance upon incorrect or incomplete documents or information.

CONFIDENTIALITY. All data, records, and information concerning the Plan and the participants of the Plan provided by you or on your behalf to VIA in connection with this Agreement, other than information that is either in the public domain, obtained from third parties, or which is otherwise developed by VIA shall be considered "Confidential Client Information." VIA agrees to use reasonable efforts to protect all Confidential Client Information and has reasonable safeguards to protect against the disclosure or misuse of Confidential Client Information that is in VIA's care or custody. VIA will protect the Confidential Client Information with the same degree of care that it uses to protect and safeguard VIA's own like information, but not less than the degree of care that would be exercised by a prudent person given the sensitivity of the Confidential Client Information. In preserving the confidentiality of Client communications and information, it is important that we have your agreement on the methods we will use in communicating with you. Unless you tell us otherwise, you agree that it is appropriate to use mail and emails in the course of our providing the Services to you without encryption or other special measures. The exception is transmission of participant census data which must be transmitted using our secure data transfer site or similar method. Please let us know if you have special requests or requirements for the methods of communication or persons to be included in such communications.

RETENTION OF RECORDS. We will retain final copies of actuarial work products for seven years after completion of each project. Although we keep copies of the work we perform for you for seven years, these copies are solely for our files. The plan sponsor is responsible for keeping copies of all documents needed for the Plan's permanent records, including copies of the work we perform for you and the information we send to you.

DETERMINATION OF FEES THAT MAY BE PAID BY THE PLAN. If you choose to pay our or other fees from the Plan, it is your responsibility as the fiduciary to ensure that it's permissible for the Plan to pay for such activities.

INDEMNIFICATION. You agree as part of this engagement to indemnify and hold harmless VIA from and against any and all claims, losses, damages, liabilities, costs, and other expenses of any kind whatsoever (including, without limitation, all reasonable attorneys' fees and collection or court costs) arising from or in connection with the operation of the Plan or the rendering of plan-related services by the Client, the Plan Administrator, or any third party. This indemnification does not include claims, losses, damages, liabilities, costs, and expenses attributable solely to any gross negligence or willful misconduct by VIA in the performance of our responsibilities under this engagement.

We agree as part of this Agreement to indemnify and hold harmless the Client and the Plan from and against any and all claims, losses, damages, liabilities, costs, and other expenses of any kind whatsoever (including, without limitation, all reasonable attorneys' fees and collection or court costs) (collectively "Claims") arising from or in connection with the operation of the Plan or the rendering of plan-related services by VIA, to the

Terms and Conditions *(continued)*

extent that such Claims are attributable solely to gross negligence or willful misconduct by VIA in the performance of our responsibilities under this engagement.

REPRESENTATIONS AND WARRANTIES. We represent and warranty that we (a) have the right, power and authority to enter into this Agreement and to fully perform all of our obligations hereunder; and (b) will use commercially reasonable efforts to provide all services required of us under the Agreement in accordance with prevailing industry standards. You represent and warranty that you have the right, power, and authority to enter into this Agreement and to fully perform all of your obligations hereunder.

NO ASSIGNMENT OR DELEGATION. Neither VIA nor you may assign this Agreement in whole or in part, nor delegate any part or all of its duties, without the other's prior written consent.

SEVERABILITY. If any provision of this Agreement is held to be or is invalid or unenforceable, the validity and/or enforceability of the remaining portions shall not be impaired or affected in any way. A waiver of any provision of this Agreement does not likewise waive any other provision of this Agreement.

MODIFYING THIS ENGAGEMENT. The terms of this engagement between you and us represented by this Agreement shall not be subject to modification (except with regard to fees, as outlined above), except as agreed upon in writing by both you and us.

TERM AND TERMINATION. **This engagement letter is effective beginning October 1, 2024 and shall automatically renew on an annual basis unless terminated earlier by either party as described below.** Future actuarial services will be provided under this same engagement letter for a fee agreed to by both parties and described in a new Scope of Services, or we can provide an updated engagement letter if you prefer.

You have the right to terminate our services with 60 days prior written notice. Termination of our services will not relieve you of the obligation to pay for all accrued charges and expenses for work through the end of our engagement. We will have the same right of termination, subject to our obligation to give you 60 days prior written notice. If our billing statements are not timely paid, however, we will have the right to terminate our Services upon 5 days prior written notice following a default in the payment of our fees and expenses, upon the expiration of which notice period we will have the right to not provide any Services or advance any expenses until all amounts due are paid in full. Furthermore, if we are required to take action to collect our fees and expenses, you agree to pay all professional fees (including reasonable attorneys' fees) and expenses incurred by us in such collection action.

ENTIRE AGREEMENT. Our performance of the Services is subject to the terms of this letter, including our Terms and Conditions ("Terms and Conditions"). This letter, together with the Scope of Services and these Terms and Conditions, constitute the entire Agreement between VIA Actuarial Solutions and you and supersede all previous agreements between us whether written or oral. Should the scope of our Services change, you agree that we will either amend the Scope of Services or we will execute a new engagement letter incorporating such changes. We will not be required to provide Services not included in the Scope of Services agreed to in this letter.

Acknowledgement and Consent

The undersigned authorized representative of the Town of Pembroke Park, Florida (Pembroke Park) and the Town of Pembroke Park's Pension Plan (the Plan) has read this letter from VIA Actuarial Solutions, understands its contents, and agrees on behalf of Pembroke Park and the Plan to the Scope of Services; fees and expenses; and Terms and Conditions set forth in the Agreement.

Date: _____, 2024 By _____

Title _____

Addendum to Terms and Conditions

The following shall be included as part of the Engagement Letter for Actuarial Serviced, dated October 28, 2024, (the "Proposal") between the **Town of Pembroke Park**, a municipal corporation organized and operating under the laws of the State of Florida, with an address of 3150 S.W. 52nd Avenue, Pembroke Pines, FL 33023 ("Town") and **VIA Actuarial Solutions**, with offices at 121 N. Washington Ave, 4th Floor, Minneapolis, MN 55401 ("VIA"). In the event of any conflict between the language in the Proposal and this Addendum, the terms of this Addendum shall take precedence.

1. **Payment Terms**

All payments shall be governed by the Local Government Prompt Payment Act, as set forth in Part VII, Chapter 218, Florida Statutes.

2. **Governing Law and Venue**

This Agreement shall be governed by and construed in accordance with the laws of the State of Florida as now and hereafter in force. The venue for any and all actions or claims arising out of or related to this Agreement shall be in Broward County, Florida.

3. **Sovereign Immunity**

Nothing contained herein is intended nor shall be construed to waive Town's rights and immunities under the common law or Section 768.28, Florida Statutes, as may be amended from time to time.

4. **Non-Discrimination & Equal Opportunity Employment**

During the performance of the Agreement, neither VIA nor any subcontractors shall discriminate against any employee or applicant for employment because of race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. VIA will take affirmative action to ensure that employees are treated during employment, without regard to their race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. Such actions must include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. VIA further agrees that VIA will ensure that subcontractors, if any, will be made aware of and will comply with this nondiscrimination clause.

5. **Independent Contractor**

This Agreement does not create an employee/employer relationship between the parties. It is the intent of the parties that VIA is an independent contractor under this Agreement and not the Town 's employee for all purposes, including but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the State Workers' Compensation Act, and the State unemployment insurance law. VIA shall retain sole and absolute discretion in the judgment of the manner and means of carrying out STS's activities and responsibilities hereunder provided, further that administrative procedures applicable to services rendered under this Agreement shall be those of VIA. VIA agrees that it is a separate and independent enterprise from the Town, that it has full opportunity to find other business, that it has made its own investment in its business, and that it takes all precautions that are standard in the industry to increase the likelihood of a successful performance for

the VIA Products and Services; however, the VIA Products and Services are provided "AS IS" and as available. This Agreement shall not be construed as creating any joint employment relationship between VIA and the Town and the Town will not be liable for any obligation incurred by VIA, including but not limited to unpaid minimum wages and/or overtime premiums.

6. **Binding Authority**

Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

7. **Assignments; Amendments**

This Agreement, and any interests herein, shall not be assigned, transferred or otherwise encumbered, under any circumstances, by VIA without the prior written consent of Town. For purposes of this Agreement, any change of ownership of VIA shall constitute an assignment which requires Town approval. However, this Agreement shall run to the benefit of Town and its successors and assigns.

It is further agreed that no modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

8. **Public Records**

8.1 The Town of Pembroke Park is a public agency subject to Chapter 119, Florida Statutes. VIA shall comply with Florida's Public Records Law. Specifically, VIA shall:

8.1.1 Keep and maintain public records required by the Town to perform the service;

8.1.2 Upon request from the Town's custodian of public records, provide the Town with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law;

8.1.3 Ensure that public records that are exempt or that are confidential and exempt from public record disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and, following completion of the Agreement, VIA shall destroy all copies of such confidential and exempt records remaining in its possession after VIA transfers the records in its possession to the Town, unless otherwise required by law; and

8.1.4 Upon completion of the Agreement, VIA shall transfer to the Town, at no cost to the Town, all public records in VIA's possession. All records stored electronically by VIA must be provided to the Town, upon request from the Town's custodian of public records, in a format that is compatible with the information technology systems of the Town.

8.2 The failure of VIA to comply with the provisions set forth in this Article shall constitute a default and breach of this Agreement, for which, the Town may terminate the Agreement by providing VIA with at least thirty (30) days prior, provided, however, that VIA will be given the opportunity to cure the breach within said period of time.

IF VIA HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO VIA'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

TOWN CLERK
3150 SW 52nd Avenue
Pembroke Park, FL 33023
(954) 966-4600 #234
townclerk@tppfl.gov

9. **Notice**

Whenever any party desires to give notice unto any other party, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended and the remaining party, at the places last specified, and the places for giving of notice shall remain such until they shall have been changed by written notice in compliance with the provisions of this section or by email. For the present, VIA and Town designate the following as the respective places for giving of notice:

TOWN: Town Manager
Town of Pembroke Park
3150 SW 52nd Avenue
Pembroke Park, Florida 33023
Telephone No. (954) 966-4600

Copy To: Jacob G. Horowitz, Town Attorney
Goren, Cherof, Doody & Ezrol, P.A.
3099 East Commercial Boulevard, Suite 200
Fort Lauderdale, Florida 33308
Telephone No. (954) 771-4500
Email: jhorowitz@gorencherof.com

VIA: VIA Actuarial Solutions
Attn: Scott Striegel
121 N Washington Ave
4th Floor
Minneapolis, MN 55401
Telephone No. 612-596-5960
Email: sstriegel@viaactuarial.com

10. **Attorneys' Fees**

In the event that either party brings suit for enforcement of this Agreement, each party shall bear its own attorney's fees and court costs.

11. **Counterparts and Execution.** This Agreement may be executed by hand or electronically in multiple originals or counterparts, each of which shall be deemed to be an original and together shall constitute one and the same agreement. Execution and delivery of this Agreement by the Parties shall be legally binding, valid and effective upon delivery of the executed documents to the other party through facsimile transmission, email, or other electronic delivery.

12. **Scrutinized Companies**

VIA, its principals or owners, certify that they are not listed on the Scrutinized Companies that Boycott Israel List, Scrutinized Companies with Activities in Sudan List, Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or are engaged in business operations with Syria. In accordance with Section 287.135, Florida Statutes, as amended, a company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with any agency or local governmental entity for goods or services of:

12.1 Any amount if, at the time bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel; or

12.2 One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company:

12.2.1 Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Section 215.473, Florida Statutes; or

12.2.2 Is engaged in business operations in Syria.

13. **E-Verify**

VIA certifies that it is aware of and complies with the requirements of Section 448.095, Florida Statues, as may be amended from time to time and briefly described herein below.

13.1 Definitions for this Section:

13.1.1 "Contractor" means a person or entity that has entered or is attempting to enter into a contract with a public employer to provide labor, supplies, or services to such employer in exchange for salary, wages, or other remuneration. "Contractor" includes, but is not limited to, a VIA or consultant.

13.1.2 "Subcontractor" means a person or entity that provides labor, supplies, or services to or for a contractor or another subcontractor in exchange for salary, wages, or other remuneration.

13.1.3"E-Verify system" means an Internet-based system operated by the United States Department of Homeland Security that allows participating employers to electronically verify the employment eligibility of newly hired employees.

13.2 Registration Requirement; Termination:

Pursuant to Section 448.095, Florida Statutes, effective January 1, 2021, Contractors, shall register with and use the E-verify system in order to verify the work authorization status of all newly hired employees. Contractor shall register for and utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of:

13.2.1 All persons employed by a Contractor to perform employment duties within Florida during the term of the contract;

13.2.2 All persons (including subconsultants/subcontractors) assigned by Contractor to perform work pursuant to the contract with the Town of Pembroke Park. The Contractor acknowledges and agrees that registration and use of the U.S. Department of Homeland Security's E-Verify System during the term of the contract is a condition of the contract with the Town of Pembroke Park; and

13.2.3 The Contractor shall comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility," as amended from time to time. This includes, but is not limited to registration and utilization of the E-Verify System to verify the work authorization status of all newly hired employees. Contractor shall also require all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. The Contractor shall maintain a copy of such affidavit for the duration of the contract. Failure to comply will lead to termination of this Contract, or if a subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than twenty (20) calendar days after the date of termination. Termination of this Contract under this Section is not a breach of contract and may not be considered as such. If this contract is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of one (1) year after the date of termination.

SIGNATURE PAGE TO FOLLOW

IN WITNESS OF THE FOREGOING, the Parties have set their hands and seals the day and year first written above.

TOWN:

TOWN OF PEMBROKE PARK

ATTEST:

BY:_____

_____
CYNTHIA GARCIA-LIMA,
TOWN CLERK

DAVID LYNCH
TOWN MANAGER

APPROVED AS TO FORM.

_____
JACOB G. HOROWITZ
TOWN ATTORNEY

VIA ACTUARIAL SOLUTIONS:

Signed By: _____

Print Name: _____

Title: _____

RESOLUTION NO. 2025-___

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, APPROVING AND AUTHORIZING THE EXECUTION OF THE AGREEMENT BETWEEN THE TOWN OF PEMBROKE PARK AND VIA ACTUARIAL SOLUTIONS, ATTACHED HERETO AS EXHIBIT "A," FOR ACTUARIAL SERVICES; AUTHORIZING THE TOWN MANAGER TO MAKE CERTAIN NON-SUBSTANTIAL CHANGES TO THE AGREEMENT; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town Commission of the Town of Pembroke Park seeks to engage VIA Actuarial Solutions pursuant to the terms and conditions set forth in the agreement attached hereto as Exhibit "A;" and

WHEREAS, Sec. 2-125(117) of the Town's Code of Ordinances authorizes the Town to waive procurement requirements pursuant to a resolution of the Town Commission; and

WHEREAS, the Town Commission of the Town of Pembroke Park, Florida, finds that engaging VIA Actuarial Solutions to assist with the Town's actuarial services related to the Town's pension plan is in the best interests of the citizens and residents of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COMMISSION OF THE TOWN OF PEMBROKE PARK, FLORIDA, THAT:

Section 1. The aforementioned "Whereas" clause is hereby ratified and confirmed as being true and correct and is incorporated herein.

Section 2. The Town Commission of the Town of Pembroke Park, Florida, hereby approves and authorizes the execution of the agreement between the Town and VIA Actuarial Solutions, attached hereto as Exhibit "A" and incorporated herein. The Town Manager is hereby authorized to execute the agreement on behalf of the Town

Section 3. The Town Manager is authorized to conform and make additional changes to the agreement which are consistent with the Town's ordinances, resolutions and policies as needed and approved as to form and legality by the Town Attorney without further approval of the Town Commission.

Section 4. All Resolutions or parts of Resolutions in conflict herewith, be and the same are repealed to the extent of such conflict.

Section 5. If any section, sentence, clause or phrase of this Resolution is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Resolution.

Section 6. This Resolution shall become effective immediately upon its passage and adoption.

PASSED AND ADOPTED this ____ day of _____, 2025.

_____
MAYOR ASHIRA MOHAMMED

ATTEST:

_____
CYNTHIA GARCIA-LIMA
Town Clerk

Approved as to form and legal sufficiency

_____
JACOB G. HOROWITZ
Town Attorney