

Peery Park Specific Plan Fee Evaluation

Peery Park Specific Plan Program Cost			
Item	Staff Hours	Cost/Hour	Total Cost
Specific Plan w/ Contingency			\$ 630,000.00
Staff Costs:			
Initial Plan Preparation	2000	120	\$ 240,000.00
Annual Maintenance (10 years @ 100 hours/year)	1000	120	\$ 120,000.0
Total Specific Plan Program Cost			\$ 990,000.00

Peery Park Development Potential			
Construction Type	Total Sq. Ft.*	Construction Cost	Building Construction Valuation
New Buildings and Additions (w/ Tenant Improvements)	3,729,000	\$170/sq. ft.	633,930,000.00
Existing Buildings: Renovations and Tenant Improvements (10 years)	n/a	\$58,000,000/year	580,000,000.00
TOTAL			1,213,930,000.00
Total Specific Plan Program Cost/Construction Valuation			0.082%

*Total Buildout in the PPSP is 9.7 million sq. ft. The New Buildings and Additions square footage was generated by the existing pending development projects and associated gross sq. ft. which totals approx. 3,729,000. The Existing Buildings calculation is based on average rates of construction estimated by the Building Division.

Peery Park Specific Plan Sense of Place Fee				
Item	Number Needed	Cost/item	Total Cost	Notes
Shuttle Stops	10	\$ 5,000.00	\$ 50,000.00	
Pastoria Avenue Streetscape Improvements:				Northern portion approximately 2,050 feet in total length
Double-head decorative LED streetlights	2 every 80' = 51	\$ 25,000.00	\$ 1,275,000.00	
24" box tree	2 every 30' = 137	\$ 4,000.00	\$ 548,000.00	Includes soil, granite, topper & irrigation
Stamped/Decorative Concrete Plaza Area	1	\$ 1,000,000.00	\$ 1,000,000.00	22' wide
New/Improved Bicycle Lanes	12	see attached	\$ 1,726,221.00	See Attached Breakdown of Bike Lanes Included
Crosswalks with In-Roadway Warning Lights	Up to 10	\$ 70,000.00	\$ 700,000.00	
			\$ 5,299,221.00	
Cost/Sq. Ft.			\$2.41	Divided by 2.2 million net new sq. ft.

Peery Park Sense of Place Fee Bicycle Lane Fee Calculation

Bicycle Lanes included in the Sense of Place Fee

New bike lanes within the district

1. Mathilda Ave between Evelyn Ave and Almanor Ave: Approximately 6,600 linear feet (LF) per lane x 2 = Total 13,200 LF.
2. Mary Ave between Central Expwy and Maude Ave: 2,500 LF per lane x 2 = Total 5,000 LF (Per 2006 Bicycle Plan) .
3. Almanor Ave between Vaqueros Ave and Mathilda Ave: 650 LF per lane x 2 = Total 1,300 LF (Per 2006 Bicycle Plan).
4. Maude Ave between Pastoria Ave and Mathilda Ave: 1,015 LF per lane x 2 = Total 2,030 LF (Per 2006 Bicycle Plan).

Improvements to existing bike lanes within the district

5. Mary Ave between Maude Ave and Almanor Ave: 2,250 LF per lane x 2 = 4,500 LF
6. Maude Ave between SR 237 and Pastoria Ave: 3,800 LF per lane x 2 = 7,600 LF.
7. Almanor Ave between Mary Ave and Vaqueros Aven: 1,350 LF per lane x 2 = 2,700 LF

Potential bike connections within the district and extending beyond

8. Ahwanee Ave from Mathilda Ave extending eastward: 5975 LF (Per 2006 Bicycle Plan)
9. New connector path segment extending Ferndale Ave westward to San Aleso Ave: 290 LF
10. New connector path segment extending Del Rey Ave eastward from Mathilda Avenue to Duane Ave: 110 LF
11. Maude Avenue eastward from Mathilda Avenue to N. Sunnyvale Avenue: 1,600 LF per lane x 2 = Total 3,200 LF
12. California Avenue from Mary Avenue to N. Sunnyvale Avenue: 3,400 LF per lane x 2 = Total 6,800 LF

Bicycle Lane General Costs

Bike Lanes (standard) -

\$800 per 100 L.F. (construction cost only)

\$1,400 per 100 L.F. (construction + start-up, design, inspection, contingencies)

Green-colored Bike Lanes (6-ft width)

\$6,000 per 100 L.F. (construction cost only)

\$10,500 per 100 L.F. (construction + start-up, design, inspection, contingencies)

Formula for Calculating Total Fee

Consider 9 and 10 as trials. 20% of the remaining total lane mileages will be colored bike lanes

Bicycle Lane Total Fee Calculation***Green Lanes***

Lane 9 = 290 LF = \$30,450

Lane 10 = 110 LF = \$11,550

20% of the remaining total lane feet = 10,461 = \$1,098,405

Regular

80% of the remaining total lane feet = 41,844 = \$585,816

Total

\$1,726,221



Peery Park Specific Plan Wastewater Utility Impact Study

Technical Memorandum No. 1

Subject	Sewer Flow Projection
Client	City of Sunnyvale
Prepared By	JiaJia Huang, P.E.
Reviewed By	Scott Humphrey, P.E.
Date - Draft	
Date - FINAL	April 7, 2016

PURPOSE

The City of Sunnyvale (City) has retained the service of Infrastructure Engineering Corporation (IEC) to prepare a wastewater utility impact study for the Peery Park Specific Plan (PPSP). IEC recently completed a Wastewater Master Plan update (WWMP) for the City that identified capital improvements to accommodate future known development at the time. New development information has been obtained for the PPSP that might impact the City's wastewater system, thus, the City has requested that IEC prepare a wastewater utility impact study for PPSP to identify the incremental impact due to the PPSP.

Before conducting hydraulic modeling analysis for the PPSP, IEC has developed the proposed development flows for the PPSP in this technical memorandum for the City's review.

DISCUSSION

The City provided IEC with land use information of the PPSP including a boundary shapefile, a traffic analysis zone (TAZ) shapefile, and a spreadsheet of the PPSP buildout summary which includes a breakdown of existing development, buildout development, land use, and jobs. IEC developed the ultimate sewer flow of PPSP based on this data and the WWMP.

Methodology

The ultimate sewer flow is calculated for individual TAZ zone by the following equation:

$$\text{Ultimate Sewer Flow} = \text{Existing Sewer Flow} - \text{Flows from Building Removed} + \text{New Development Flow due to PPSP}$$

The existing sewer flow was calculated in parcel level in the WWMP, and the parcels are assigned to the corresponding TAZ zone in this study to obtain the existing sewer flow for individual TAZ zone.

Flows from the building removed due to PPSP are calculated based on the ratio of area removed over the existing property area with the following equations:

$$\text{Flows from the Building Removed} = \text{Existing Sewer Flow} \times \text{Percentage of Area Removed}$$

$$\text{Percentage of Area Removed} = \frac{\text{Building Sq. ft. Removed}}{\text{Existing Building Square Footage Removed}}$$

The new development flow due to PPSP is calculated based on the land use type and the sewer generation factors from WWMP. The following equation is used for calculated sewer flows:

$$\text{New Development Flow due to PPSP} = \text{Proposed Building Square Footage or units} \times \text{Sewer Generation Factor}$$



Sewer Flow Calculation

The land use breakdown for buildout of the PPSP has been organized in Table 1. Table 2 lists the sewer generation factors used in this study, and Table 3 lists the new development flow, existing sewer flow, existing sewer flow excluding removed area, and the ultimate sewer flow. The ultimate PPSP flow would be approximately 975,000 gpd, or 0.975 mgd. A comparison of the existing flow from the WWMP, build-out flow from the WWMP, and PPSP build-out flow are listed in Table 4.

Table 1. Land Use Breakdown of Buildout for Peery Park Development

TAZ Landuse Type	1555	1523	1542	1540	1539	1541	1538	1537	1554	1556	1557	1558	1580	Total
Office - Total (sq. ft.)	0	0	0	340,000	0	1,073,897	334,095	0	222,000	580,000	406,715	0	176,617	3,133,324
Office - Projects Under Construction	0	0	0	0	0	643,897	124,095	0	0	0	71,715	0	106,617	946,324
Office - Estimated Projects	0	0	0	340,000	0	430,000	210,000	0	222,000	580,000	335,000	0	70,000	2,187,000
Industrial (sq. ft.)	0	50,000	0	290,000	40,000	90,000	100,000	0	74,000	0	200,000	200,000	30,000	1,074,000
Retail (sq. ft.)	0	0	15,000	20,000	0	20,000	10,000	0	0	120,000	35,000	10,000	0	230,000
Housing Units	0	0	215	0	0	0	0	0	0	0	0	0	0	215
Existing Building Area (sq. ft.)	20,560	248,100	403,523	499,569	745,980	559,288	238,138	374,150	970,527	621,357	808,769	421,368	677,577	6,588,906
Buidling Square Footage Removed (sq. ft.)	0	16,760	146,000	258,000	20,000	137,000	100,000	0	94,000	292,000	180,000	96,000	0	1,339,760
Percentage of Area Removed	0%	6.76%	36.18%	51.64%	2.68%	24.50%	41.99%	0.00%	9.69%	46.99%	22.26%	22.78%	0.00%	20.33%
Net Estimated Commercial Development (sq. ft.)	0	33,240	- 131,000	392,000	20,000	403,000	220,000	0	202,000	408,000	390,000	114,000	100,000	2,151,240
Net total Commercial Development (including Projects Under Construction) (sq. ft.)	0	33,240	- 131,000	392,000	20,000	1,046,897	344,095	0	202,000	408,000	461,715	114,000	206,617	3,097,564
Total New District Commercial Development (sq. ft.)	20,560	281,340	272,523	891,569	765,980	1,606,185	582,233	374,150	1,172,527	1,029,357	1,270,484	535,368	884,194	9,686,470

Table 2. Sewer Generation Factors

Landuse Type	Sewer Generation Factors	
	gpd/unit	gpd/1000 sq. ft.
Office	-	170
Industrial	-	115
Retail	-	245
Low Density Residential	215	-

Table 3. Sewer Flow Projection

TAZ Landuse Type	1555	1523	1542	1540	1539	1541	1538	1537	1554	1556	1557	1558	1580	Total
Office - Total (gpd)	0	0	0	57,800	0	182,562	56,796	0	37,740	98,600	69,142	0	30,025	532,665
Office - Projects Under Construction (gpd)	0	0	0	0	0	109,462	21,096	0	0	0	12,192	0	18,125	160,875
Office - Estimated Projects (gpd)	0	0	0	57,800	0	73,100	35,700	0	37,740	98,600	56,950	0	11,900	371,790
Industrial (gpd)	0	5,750	0	33,350	4,600	10,350	11,500	0	8,510	0	23,000	23,000	3,450	123,510
Retail (gpd)	0	0	3,675	4,900	0	4,900	2,450	0	0	29,400	8,575	2,450	0	56,350
Housing (gpd)	0	0	46,225	0	0	0	0	0	0	0	0	0	0	46,225
New Development Flow (gpd)	0	5,750	49,900	96,050	4,600	197,812	70,746	0	46,250	128,000	100,717	25,450	33,475	758,750
Existing Sewer Flow (gpd)	2,313	23,296	28,849	51,803	32,648	21,482	8,669	7,052	31,552	13,247	36,308	16,822	12,350	286,390
Existing Sewer Minus Removed Area (gpd)	2,313	21,722	18,411	25,050	31,773	16,220	5,029	7,052	28,496	7,022	28,227	12,990	12,350	216,653
Total Ultimate Sewer Flow (gpd)	2,313	27,472	68,311	121,100	36,373	214,032	75,775	7,052	74,746	135,022	128,944	38,440	45,825	975,403

Table 4. Sewer Flow Comparison

Phase	PPSP Development Site
Existing Flow	286,390
Ultimate Buildout Flow Projected in WWMP	365,623
Total Peery Park Buildout Flow	975,403



TECHNICAL MEMORANDUM

Peery Park Specific Plan Wastewater Utility Impact Study

Technical Memorandum No. 2

Subject	Wastewater System Hydraulic Analysis
Client	City of Sunnyvale
Prepared By	JiaJia Huang, P.E.
Reviewed By	Scott Humphrey, P.E.
Date - Draft	
Date - FINAL	March 29, 2016

EXECUTIVE SUMMARY

The City of Sunnyvale (City) has requested Infrastructure Engineering Corporation (IEC) complete a wastewater utility impact study for the Peery Park Specific Plan (PPSP) as it could potentially impact the City's sewer system.

IEC recently completed a Wastewater Master Plan update (WWMP) for the City that identified a Capital Improvement Program (CIP) based upon current known development information at that time. Since the finalization of the WWMP, a specific plan is being developed for the Peery Park area that has proposed of increase in land use intensity. As these proposed changes may impact the recently recommended capital improvements, the City has requested that the WWMP be examined as part of this study.

The purpose of this study is to analyze the hydraulic capacity of the City's wastewater system based upon the proposed ultimate incremental flow increase of the PPSP and identify any additional capital improvements required due to the PPSP.

This study only analyzed 10-inch and greater pipelines and a few 8-inch pipelines specified by the City in the WWMP, the remaining 8-inch and smaller pipelines may be affected by the development flows and would require separate study on a project to project basis. Additional upgrades may be necessary based on the results of the separate study. The City's wastewater system was analyzed for planning years of Baseline (2015), Early Finish (2025), and Buildout (2035) under Average Dry Weather Flow (ADWF), Peak Dry Weather Flow (PDWF), and Peak Wet Weather Flow (PWWF), and additional pipeline improvements were determined based on the 2035 PWWF model results. Table ES-1 summarizes the pipelines recommended for upsizing due to the PPSP incremental development flows with their proposed diameters, length, and costs. Table ES-2 summarizes the total capital improvement costs for the proposed pipeline improvements and identifies the cost sharing for developers on a per development building square footage basis. The costs were developed based upon the escalated unit costs used in the WWMP to today's dollars using the Engineering News Record Construction Cost Index for the San Francisco, California Area (ENR-CCI-SF). The tables are not full representation of the improvements or costs associated with the growth in to PPSP as 6-inch and 8-inch pipelines were not analyzed for this report. A separate study will be required on a project to project basis that may result in the need for additional upgrades to smaller pipelines.

**Table ES-1. Recommended Pipeline Improvements and Cost Estimates**

Proposed Diameter (in.)	Length (LF)	Costs (\$)
12	518	220,051
15	3,521	1,732,337
18	3,814	2,060,469
21	313	189,963
27	429	293,859
30	1,132	818,898
33	402	312,426
36	428	355,347
39	212	189,883
42	549	529,179

Total	6,702,411
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* Costs include construction cost, soft costs, and contingency.

- This table is not a full representation of the improvements and costs associated with the growth in to the PPSP development.

Table ES-2. Capital Improvement Cost Per Square Footage

PPSP Net Growth Square Footage	Total CIP Capital Cost (\$)	Cost per Square Footage (\$)
2,151,340	6,702,411	3.12

* Costs include construction cost, soft costs, and contingency.



DISCUSSION

BACKGROUND

The Peery Park Specific Plan (PPSP) is a project that provides guidance on future developments, transportation improvements, and infrastructure improvements of the Peery Park area in order to create a prosperous workplace district. Peery Park contains 446 net acreage and is located in the northwest portion of the City. The district is roughly bounded by California State Route 237 to the north and northwest, Mathilda Ave to the east, the Southern Pacific Rail Line to the south, and Mary Ave to the west. The PPSP development area is currently identified as an industrial business park and the PPSP proposes land use intensification that may allow redevelopment for under-utilized or under-developed industrial properties to provide new commercial space for technology-based business uses, mixed commercial, and a limited number of residential uses over the next 20 years.

Approximately a net growth of 2.2 million building square feet (sf) is proposed for commercial use as well as mixed commercial and residential uses. The buildout for commercial uses is approximately 9.7 million sf with approximately 7.5 million sf currently existing or under construction. The buildout for housing is approximately 215 units.

Figure 1 shows the vicinity map of the PPSP project area.

SEWER HYDRAULIC ANALYSIS

Incremental Flow Calculation

In order to perform a sewer hydraulic analysis for the system, incremental development flows for 2015, 2025, and 2035 are determined with respect to the WWMP flows of the corresponding planning years for the PPSP project area under parcel level. The new development flow of each Traffic Analysis Zone (TAZ) calculated in TM No.1 was proportionated to the parcels based on the parcel area to TAZ area ratio. Table 1 compares the built-out flows projected in the WWMP and due to the PPSP. Approximately 0.61 mgd of additional sewer flow will be added to the City's sewer system by the year 2035 and upon the complete buildout of PPSP.

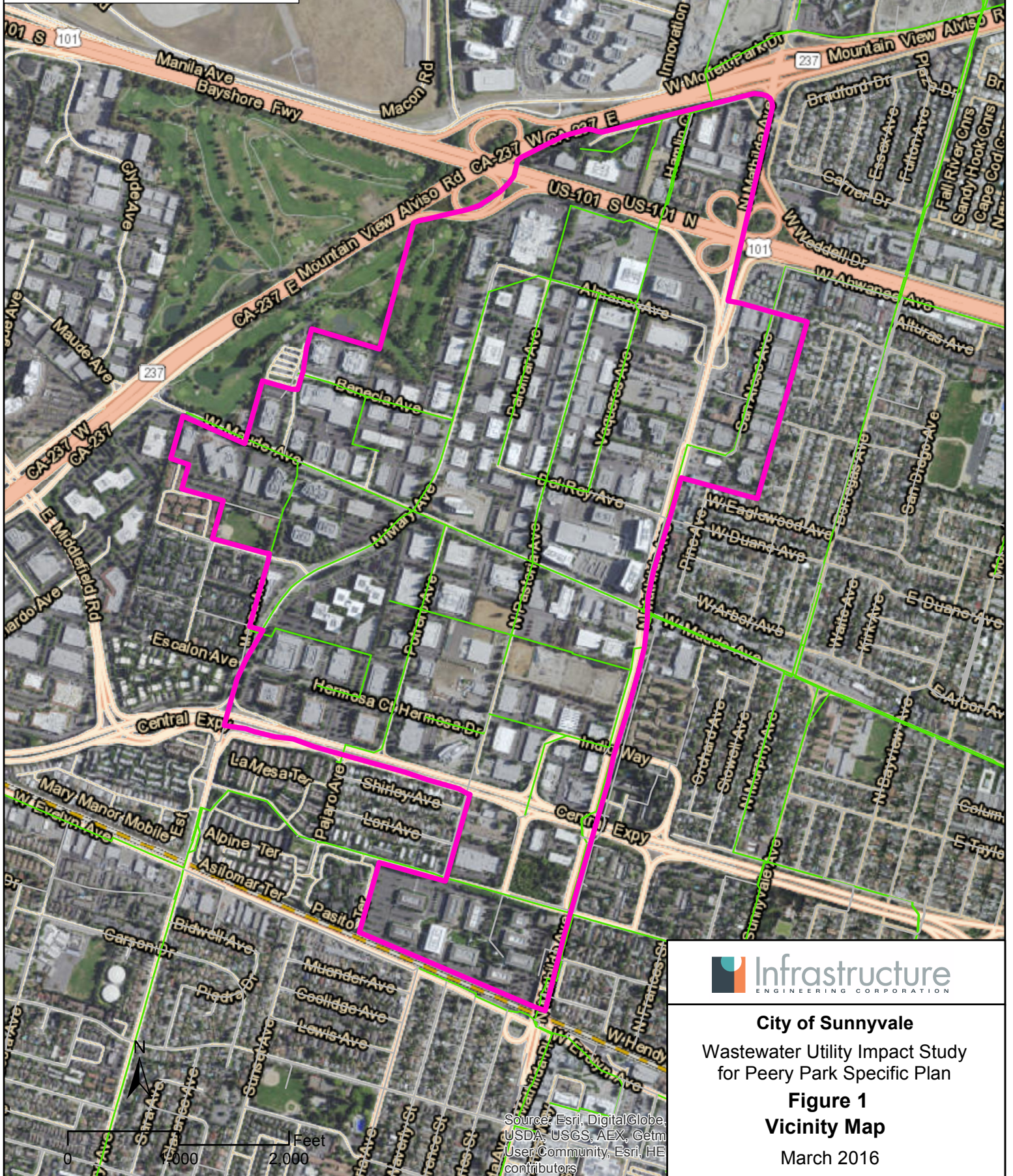
Table 1. Summary of Sewer Flow Projections for PPSP Parcels Projected in This Study and Master Plan

Plan Year	WWMP		PPSP		Incremental Flow Increase (mgd)
	gpd	mgd	gpd	mgd	
2035	365,623	0.366	975,403	0.975	0.610

Figure 2 shows the pipelines that convey the PPSP flows.

Legend

- Peery Park Boundary
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

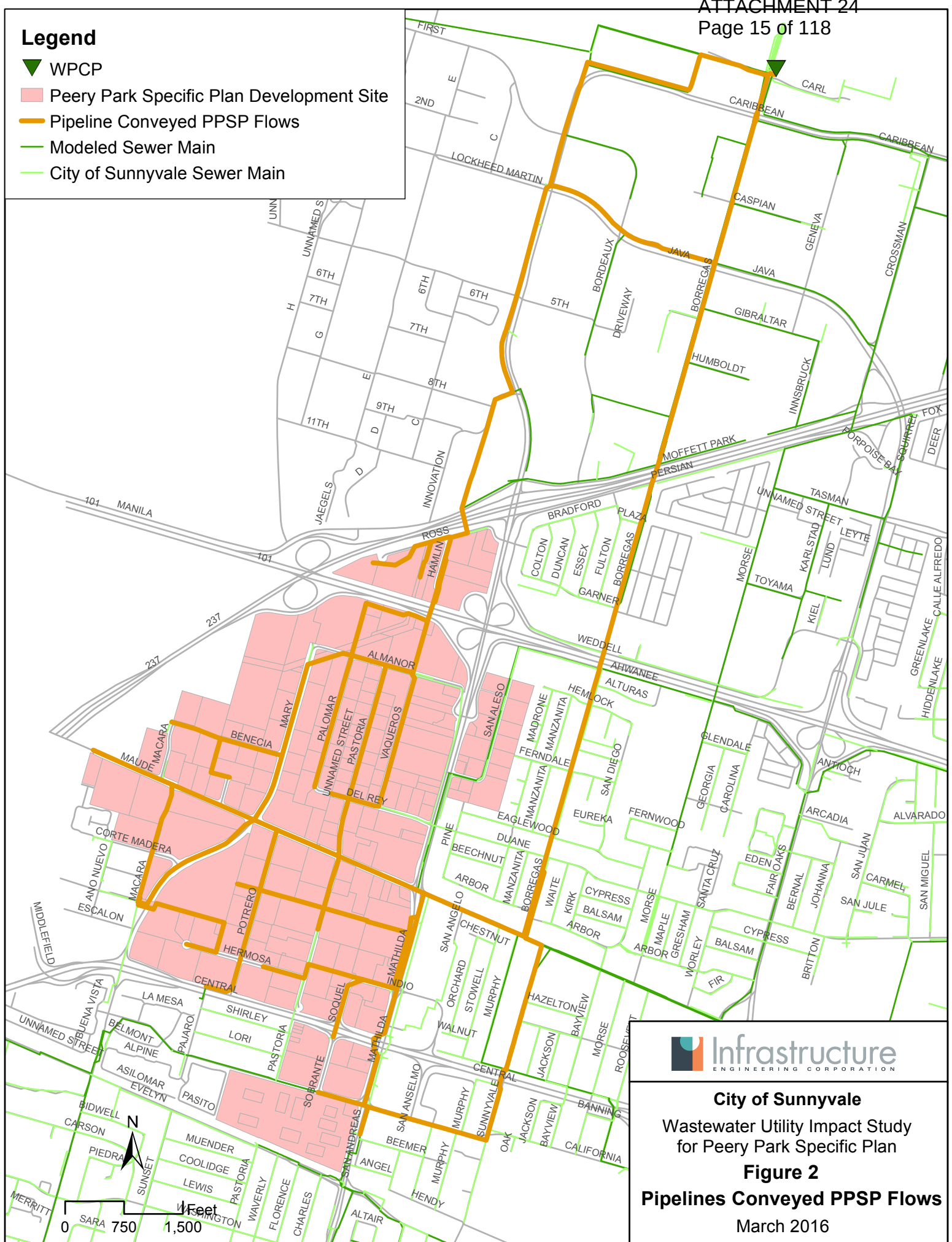
Figure 1
Vicinity Map

March 2016

Source: Esri, DigitalGlobe,
USDA, USGS, AEX, Getm
User Community, Esri, HE
contributors

▼ WPCP

- Peery Park Specific Plan Development Site
— Pipeline Conveyed PPSP Flows
— Modeled Sewer Main
— City of Sunnyvale Sewer Main



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City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan
Figure 2
Pipelines Conveyed PPSP Flows
March 2016



Hydraulic Modeling

As part of the City's WWMP, IEC developed an InfoSWMM sewer system hydraulic model from the sewer system GIS database. This platform combines a fully dynamic hydraulic modeling engine developed and approved by the Environmental Protection Agency (EPA) with the GIS interface that can take advantage of the data that the City has built into its sewer system GIS database.

Six model scenarios were set up for 2015 without PPSP flow contribution, 2015 with PPSP flow contribution, 2025 without PPSP flow contribution, 2025 with PPSP flow contribution, 2035 without PPSP flow contribution, and 2035 with PPSP flow contribution, respectively, and each was run under ADWF, PDWF, and PWWF conditions.

ADWF was calculated using base flows, which were calculated based upon the parcel land use information and the sewer generation factors developed in the WWMP, with the inclusion of Groundwater Infiltration (GWI). PDWF was calculated by applying either the Residential or Non-Residential Diurnal Demand Curve from the WWMP to the respective categorized base flows with the inclusion of GWI. PWWF was calculated by application of the diurnal demand curves developed in the WWMP to the respectively categorized base flows with the inclusion of GWI and rainfall dependent infiltration/inflow (RDI/I).

The sizing criteria used in the WWMP were also used to size the proposed new pipelines:

- Pipes 12-inches in diameter and smaller: $\frac{1}{2}$ full at peak wet weather flow
- Pipes over 12-inches in diameter: $\frac{3}{4}$ full at peak wet weather flow
- Minimum velocity: 2 feet per second ($\frac{1}{2}$ full or full)
- Maximum velocity: 10 feet per second
- Manning's n: .013

Existing pipelines are permitted to flow up to 75 percent full at the PWWF condition before improvement projects will be identified. Only 10-inch and greater pipelines and a few 8-inch pipelines specified by the City in the WWMP were analyzed in this study, the remaining 8-inch and smaller pipelines may be affected and would require separate study on a project to project basis. In order to evaluate the current capacity of the system, the 2015 model scenarios analyzed the City's system with existing diameters and WWMP CIP diameters proposed for planning year 2015. The remaining model scenarios were analyzed under CIP diameters identified in the WWMP for the corresponding phase.

Results

Model results for each scenario are shown in the appendices. Table A-1 to Table A-6 shows the model results for 2015 without PPSP flow contribution, 2015 with PPSP flow contribution, 2025 without PPSP flow contribution, 2025 with PPSP flow contribution, 2035 without PPSP flow contribution, and 2035 with PPSP flow contribution, respectively. Because the City's design criteria are based upon PWWF, the comparison of PWWF results for all scenarios can be seen in Table A-7. Deficient pipelines were identified and upsized accordingly, and the recommended sizes were revealed in the PPSP CIP column.

The tables are sorted from the greatest depth over diameter (d/D) ratio to the smallest d/D ratio under PWWF conditions. Pipelines highlighted in red are pipelines proposed for upsizing in the WWMP. Among these studied pipelines, 18 pipeline segments were proposed for upsizing in the WWMP, and three of them have been replaced recently, which are P53, P54, and P55. Some pipelines were shown deficient due to backwater conditions and the deficiency gets eliminated once the downstream pipeline gets upsized. Figure 3-1 to Figure 3-15 shows the studied pipelines geographically.

Capital Improvements and Development Fee

Based upon the model results, pipeline improvements required to accommodate the City's future developments and the PPSP Buildout flows were identified. Per the City's request, IEC developed cost estimates for the improvements based upon unit costs identified in the WWMP and escalated to today's dollars. The ENR-CCI-SF for July 2015 is 11155. Since prices of materials and labor fluctuate with time, new estimates should be obtained during pre-design for proposed facilities to confirm budget amounts. Costs estimates herein for recommended facilities should be adjusted in the future either by making new estimates or by comparing the future ENR-CCI-SF index to 11155.

Table 2 shows the pipelines proposed for improvements, the corresponding unit costs, and the capital improvement costs, but it is not a full representation of the improvements and costs associated with the growth in the PPSP because 6-inch



and 8-inch pipelines were not analyzed for this report and a separate study will be required on a project to project basis that may result in the need for additional upgrades of smaller pipelines. The unit costs herein include the construction cost, soft costs, and contingency. A factor of 45% of construction cost has been used for soft costs, and a factor of 30% of construction costs plus soft costs has been used for contingency.

Table 2. Proposed CIP and Cost Estimates

Sewer Main ID	Facility ID	Length (ft.)	Existing Diameter (in.)	WWMP Diameter (in.)	PPSP CIP Diameter (in.)	Unit Cost (\$)	Capital Cost (\$)	Figure
P47	S5290202-5290213XX	95.0	12	12	15	492	46,743	3-7
P110	S5290204-5290202XX	278.0	12	12	15	492	136,785	3-7
P108	S5120211-5120206XX	155.0	12	12	15	492	76,265	3-7
P107	S5130208-5120211XX	218.0	12	12	15	492	107,263	3-7
P41	S5130212-5130208XX	258.0	12	12	15	492	126,944	3-7
P183	S5130210-5130212XX	115.0	10	10	15	492	56,584	3-7
P50	S5290207-5290208XX	180.0	12	12	15	492	88,566	3-8
P49	S5290206-5290207XX	200.0	12	12	15	492	98,406	3-8
P48	S5290213-5290206XX	200.0	12	12	15	492	98,406	3-8
P109	S5120206-5290204XX	244.0	12	12	15	492	120,056	3-7
P164	S4500212-4500211XX	373.0	16	16	27	685	255,500	3-11
P165	S4500211-4500210XX	56.0	16	16	27	685	38,359	3-11
P46	S5290202-5290203XX	173.2	15	15	18	540	93,581	3-7
P44	S5120210-5120207XX	204.0	15	15	18	540	110,209	3-7
P45	S5120207-5290203XX	200.0	15	15	18	540	108,054	3-7
P51	S5290208-5520204XX	333.0	12	12	15	492	163,847	3-8
P98	S6500206-6500209XX	47.5	18	18	21	608	28,872	3-10
P97	S6500207-6500206XX	127.1	18	18	21	608	77,274	3-10
P150	S5310212-5500209XX	132.7	27	27	33	777	103,091	3-12
P138	S4710213-4900224XX	203.1	27	27	30	724	146,980	3-11
P86	S6520205-6520204XX	233.7	33	33	42	965	225,475	3-10
P99	S6500209-6510201XX	137.9	18	18	21	608	83,816	3-10
P52	S5520204-5520203XX	84.8	12	12	15	492	41,714	3-8
P85	S6520225-6520205XX	17.8	33	33	42	965	17,167	3-10
P144	S5110229-5110211XX	69.1	27	27	30	724	50,029	3-12
P106	S6520208-6520225XX	211.6	33	33	39	897	189,883	3-10
P242	S3920207-3920206XX	273.8	8	8	12	424	116,228	3-1
P151	S5500209-5500207XX	269.5	27	27	33	777	209,335	3-12
P149	S5300202-5310212XX	215.1	27	27	30	724	155,656	3-12
P145	S5110211-5110209XX	381.0	27	27	30	724	275,676	3-12
P67	S6090201-6090205XX	370.0	12	15	18	540	199,900	3-9
P68	S6090205-6090202XX	216.6	12	15	18	540	117,023	3-9
P66	S5920208-6090201XX	361.0	12	15	18	540	195,038	3-9
P105	S6510210-6520208XX	40.0	33	33	36	830	33,191	3-10
P65	S5920209-5920208XX	319.8	12	15	18	540	172,778	3-9
P64	S5920206-5920209XX	20.4	12	15	18	540	11,036	3-9

**Table 2. Proposed CIP and Cost Estimates**

Sewer Main ID	Facility ID	Length (ft.)	Existing Diameter (in.)	WWMP Diameter (in.)	PPSP CIP Diameter (in.)	Unit Cost (\$)	Capital Cost (\$)	Figure
P139	S4900224-4900207XX	263.4	27	27	30	724	190,557	3-11
P63	S5920210-5920206XX	105.0	12	15	18	540	56,728	3-9
P241	S3920208-3920207XX	244.6	10	10	12	424	103,824	3-1
P62	S5920207-5920210XX	280.0	12	15	18	540	151,276	3-9
P163	S4320227-4500212XX	353.0	16	16	18	540	190,715	3-11
P104	S6510208-6510210XX	388.3	33	33	36	830	322,155	3-10
P61	S5690207-5920207XX	158.3	12	15	18	540	85,525	3-9
P60	S5690201-5690207XX	552.4	12	15	18	540	298,471	3-9
P59	S5690202-5690201XX	32.0	12	15	18	540	17,289	3-9
P87	S6520214-6520204XX	297.0	39	39	42	965	286,536	3-10
P58	S5690203-5690202XX	468.0	12	15	18	540	252,847	3-9
P57	S5690204-5690203XX	331.0	12	15	15	492	162,863	3-8
P69	S6090202-6100203XX	373.0	12	15	15	492	183,528	3-9
P70	S6100203-6100205XX	56.0	12	15	15	492	27,554	3-9
P56	S5520201-5690204XX	400.0	12	15	15	492	196,813	3-8

Total**6,702,411**

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

- This table is not a full representation of the improvements and costs associated with the growth in the PPSP because 6-inch and 8-inch pipelines were not analyzed for this report and a separate study will be required on a project to project basis that may result in additional upgrades.

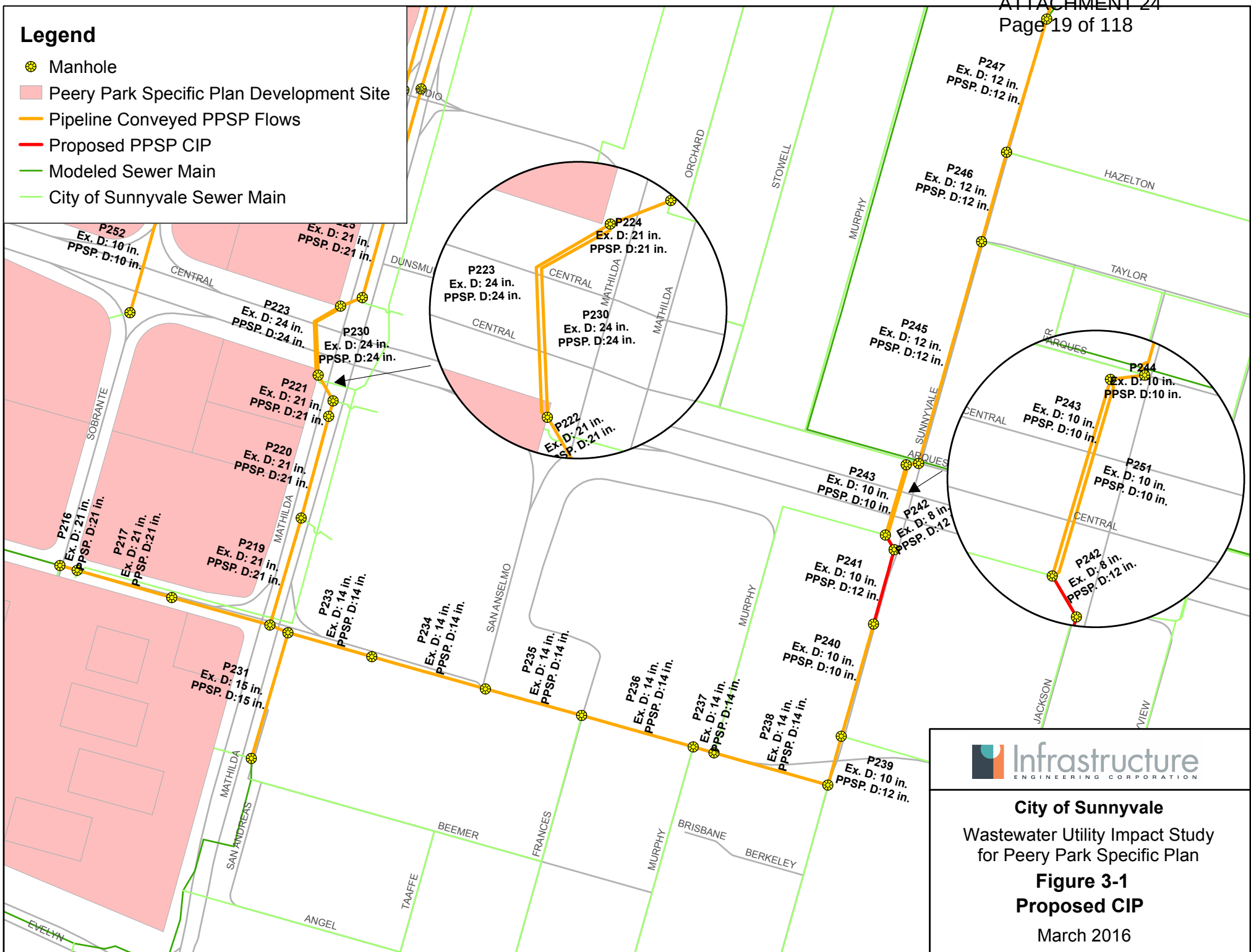
The total CIP proposed for PPSP in this study costs approximately 6.7 Million Dollars. Costs may increase if additional improvements for smaller pipelines are required. Based on the calculated costs estimates, the development fee per building square footage for PPSP is approximately \$3.1/sf, as shown in Table 3. The development fee will also increase if additional pipeline improvements needed.

Table 3. Capital Improvement Cost Per Square Footage

PPSP Net Growth Square Footage	Total CIP Capital Cost (\$)	Cost per Square Footage (\$)
2,151,340	6,702,411	3.12

Legend

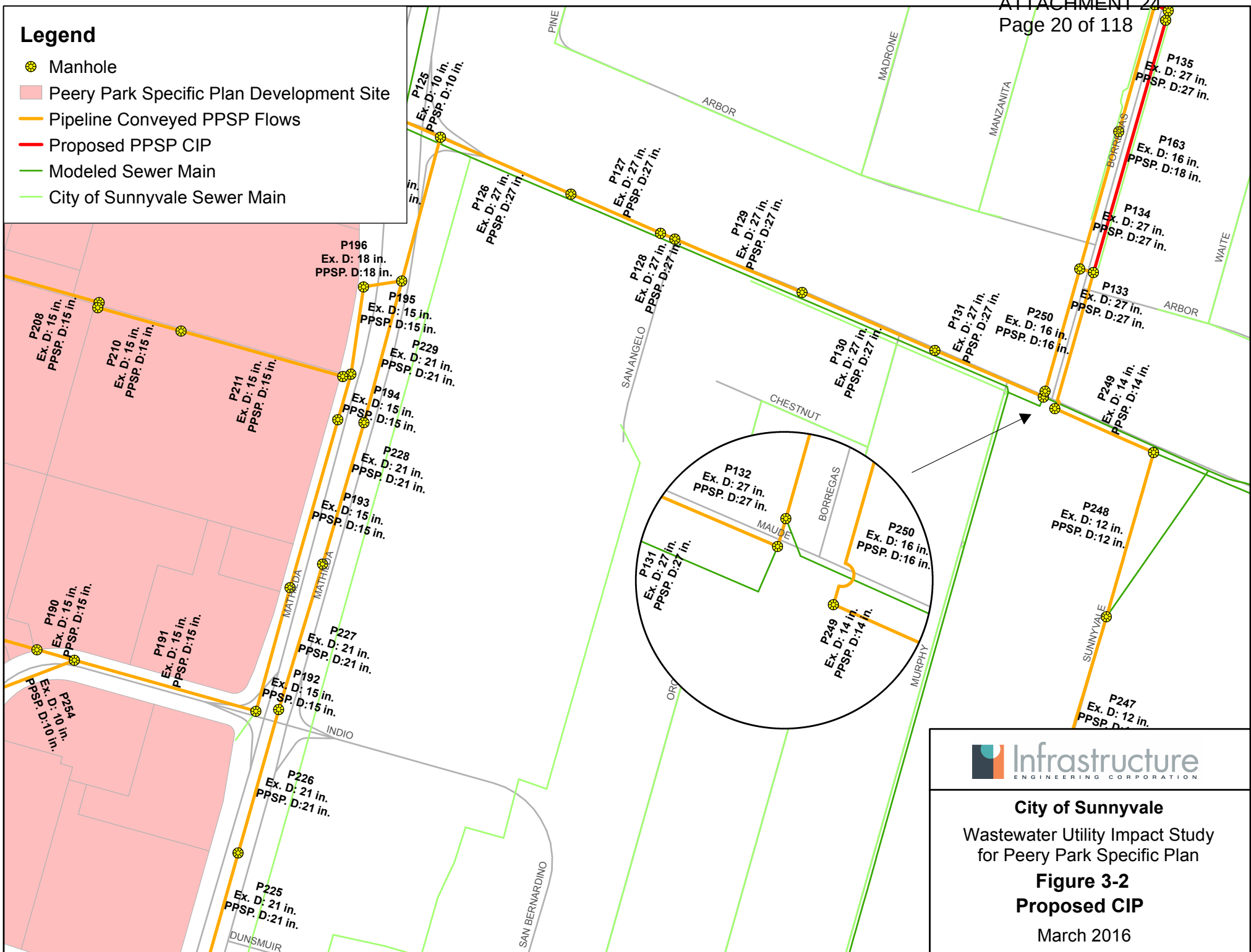
-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan
Figure 3-1
Proposed CIP
March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-2
Proposed CIP

March 2016

Legend

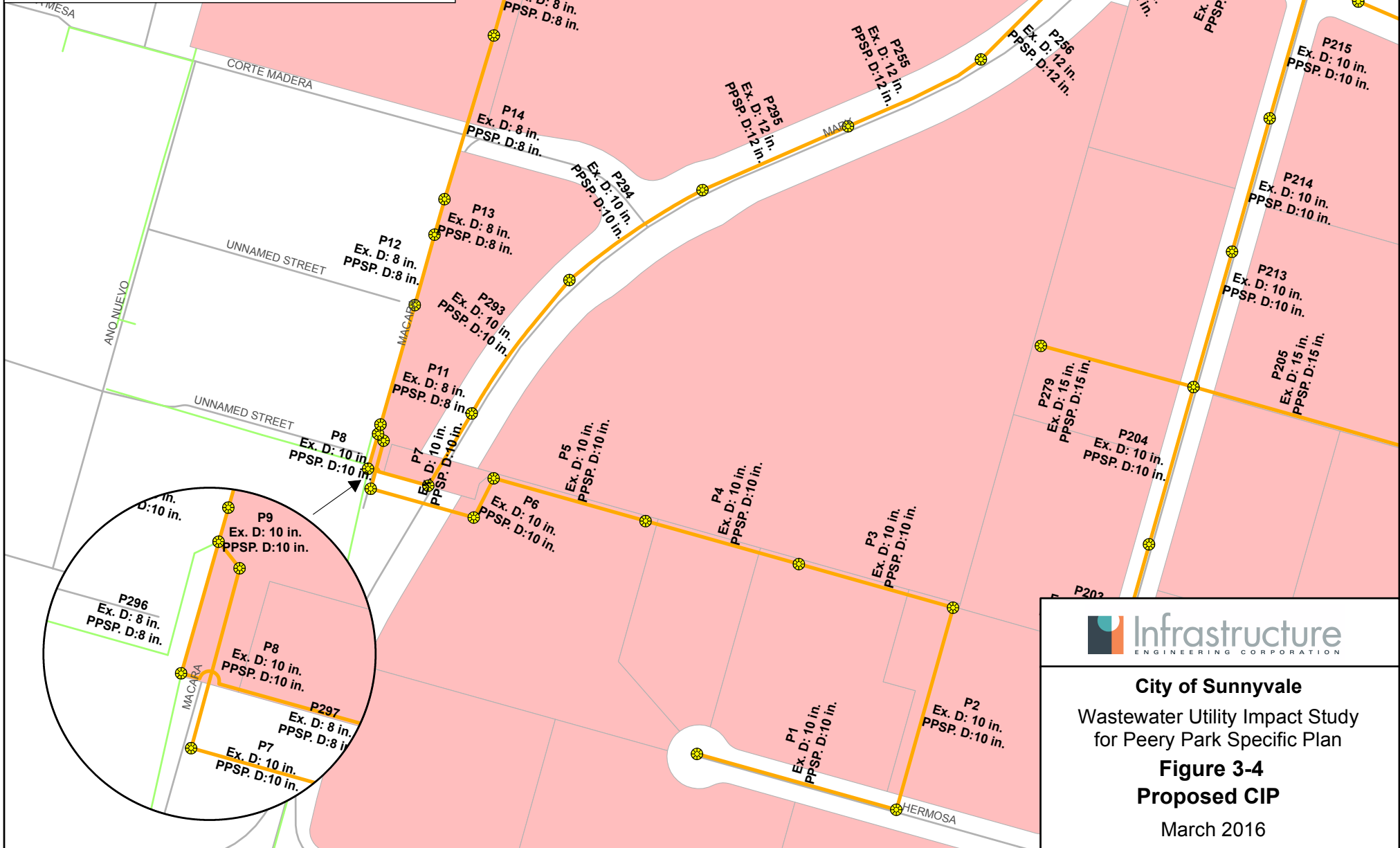
-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan
Figure 3-3
Proposed CIP
March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-4
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



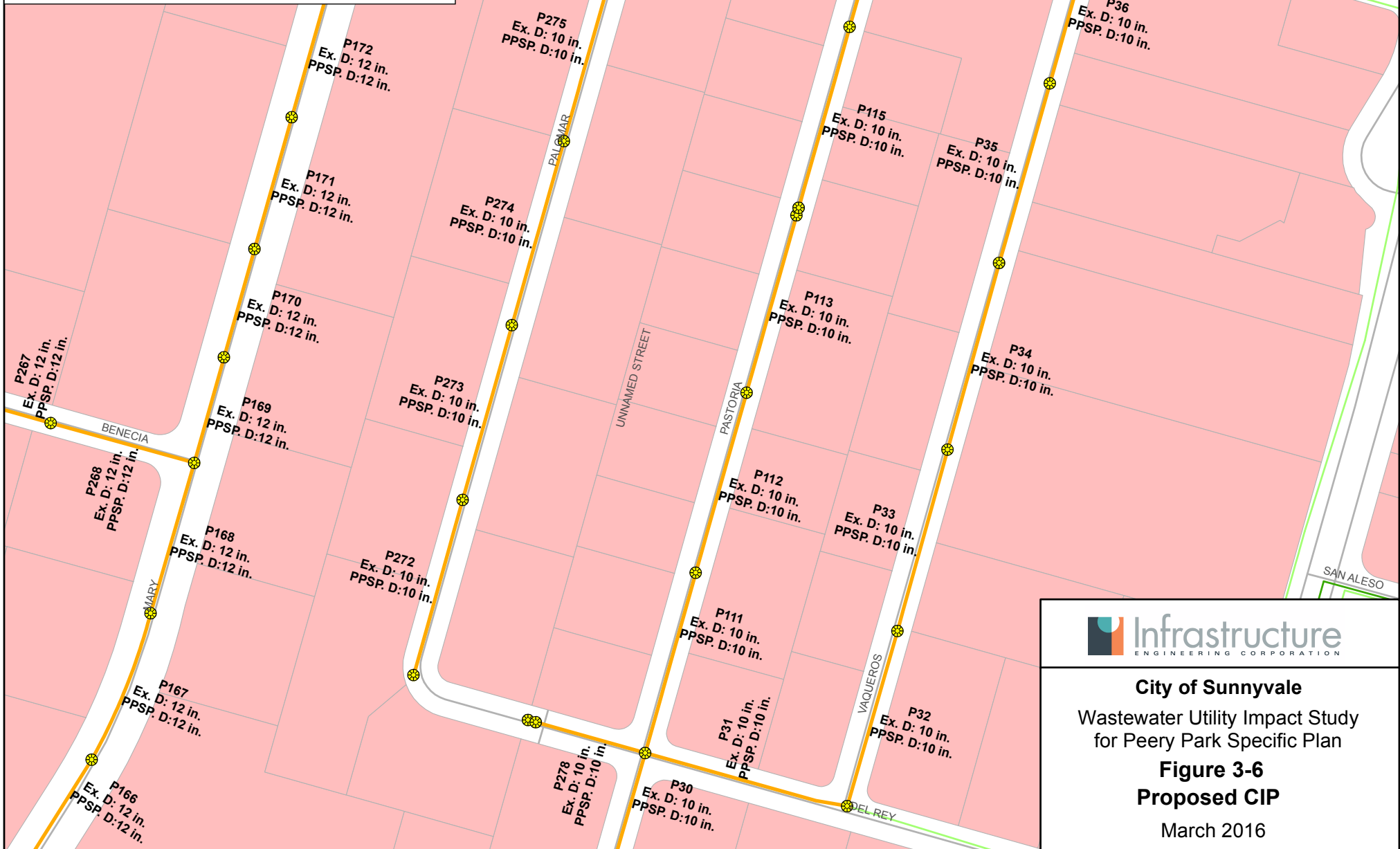
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-5 Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



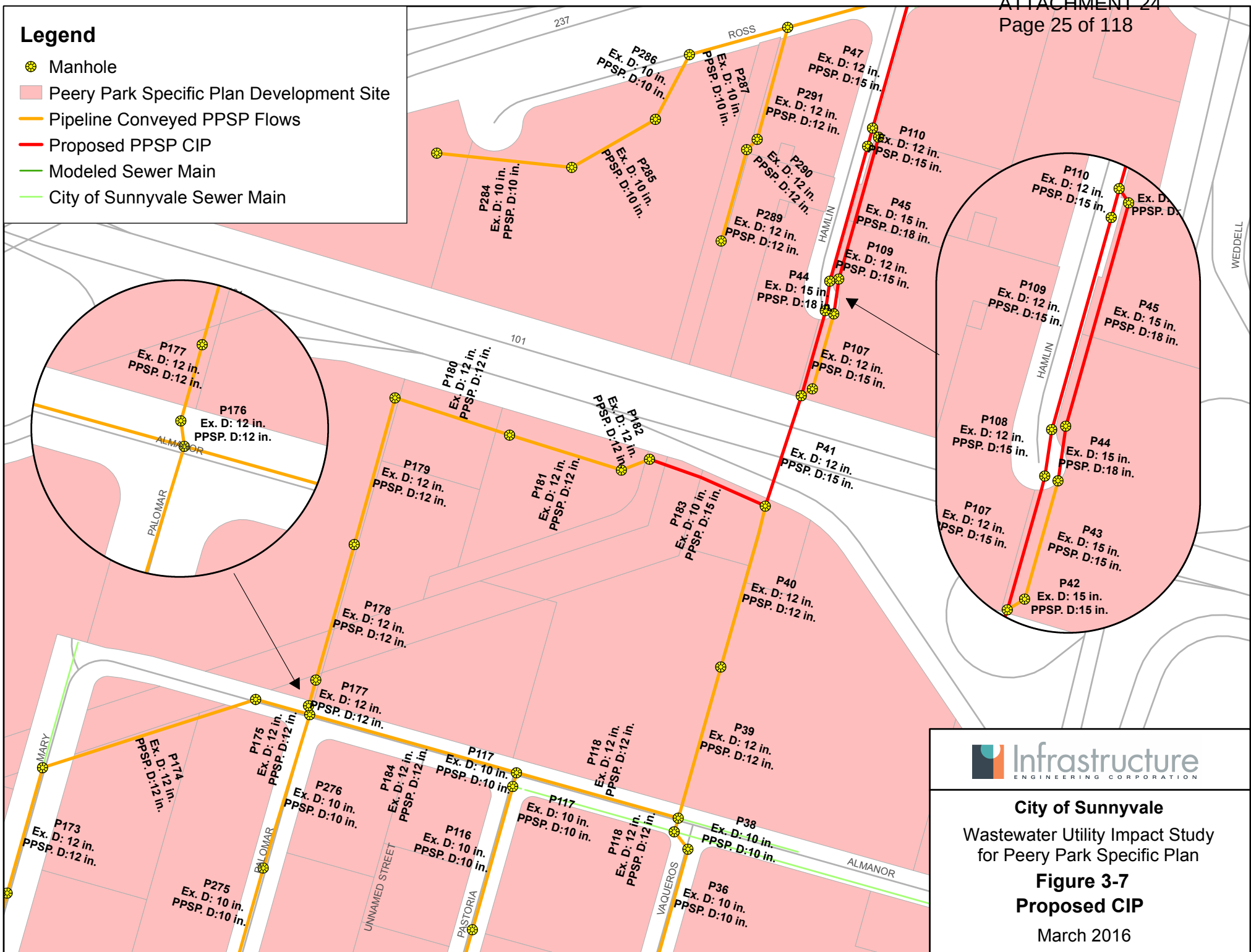
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-6
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



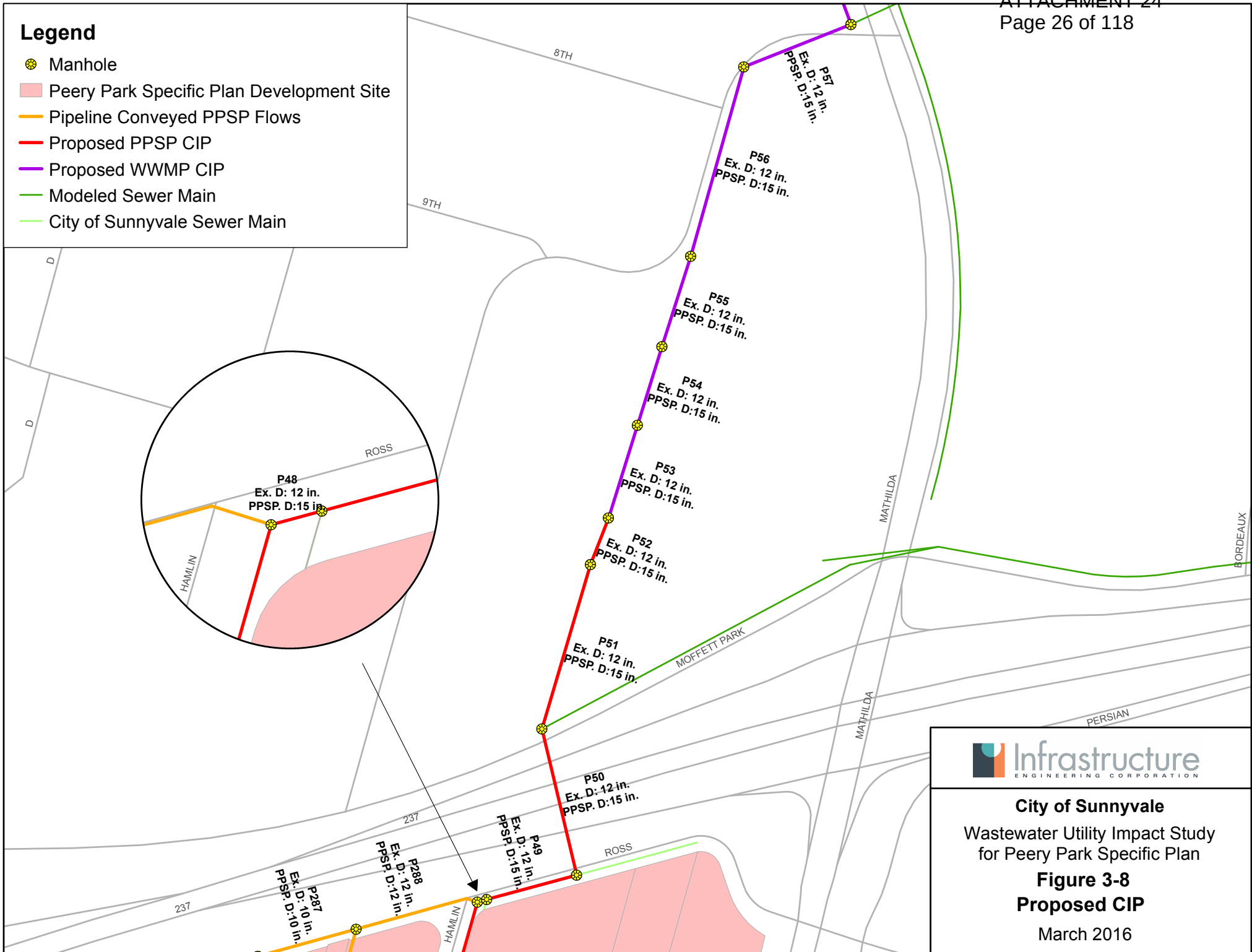
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-7
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Proposed WWMP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



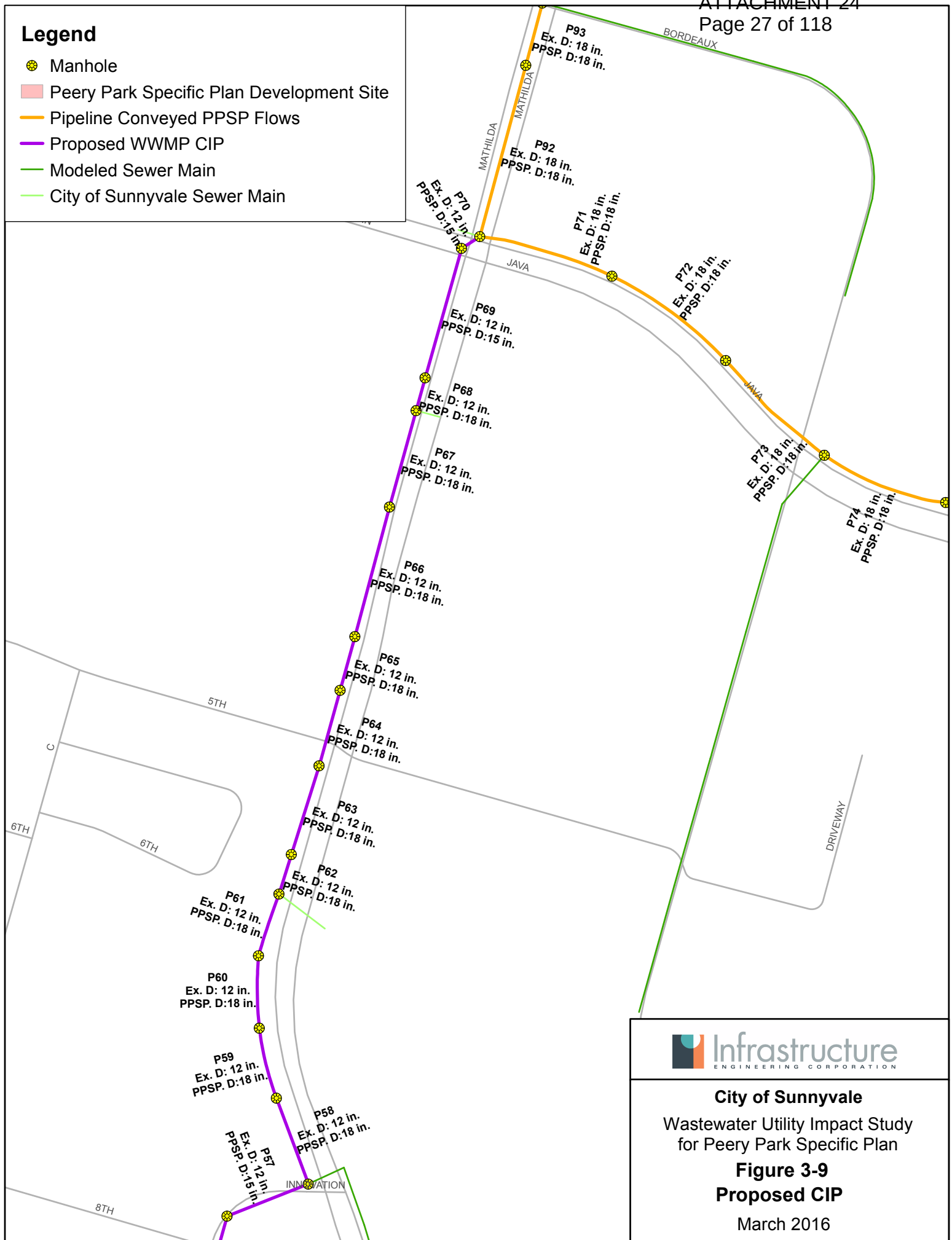
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-8
Proposed CIP

March 2016

Legend

- Manhole
- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Proposed WWMP CIP
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-9
Proposed CIP

March 2016

Legend

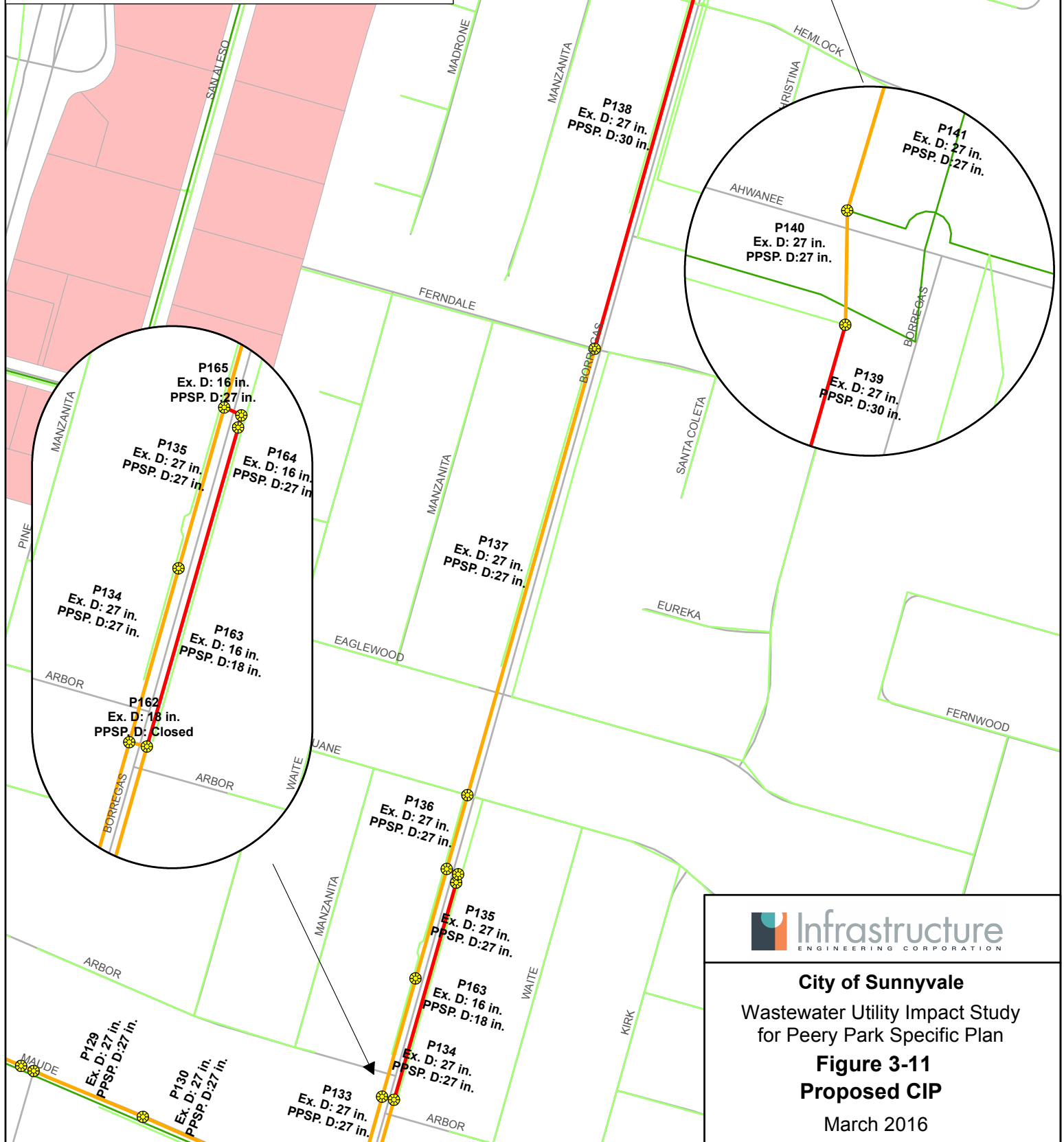
-  Manhole
-  WPCP
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan
Figure 3-10
Proposed CIP
March 2016

Legend

- Manhole
- Peery Park Specific Plan Development Site
- Pipeline Conveyed PPSP Flows
- Proposed PPSP CIP
- Modeled Sewer Main
- City of Sunnyvale Sewer Main



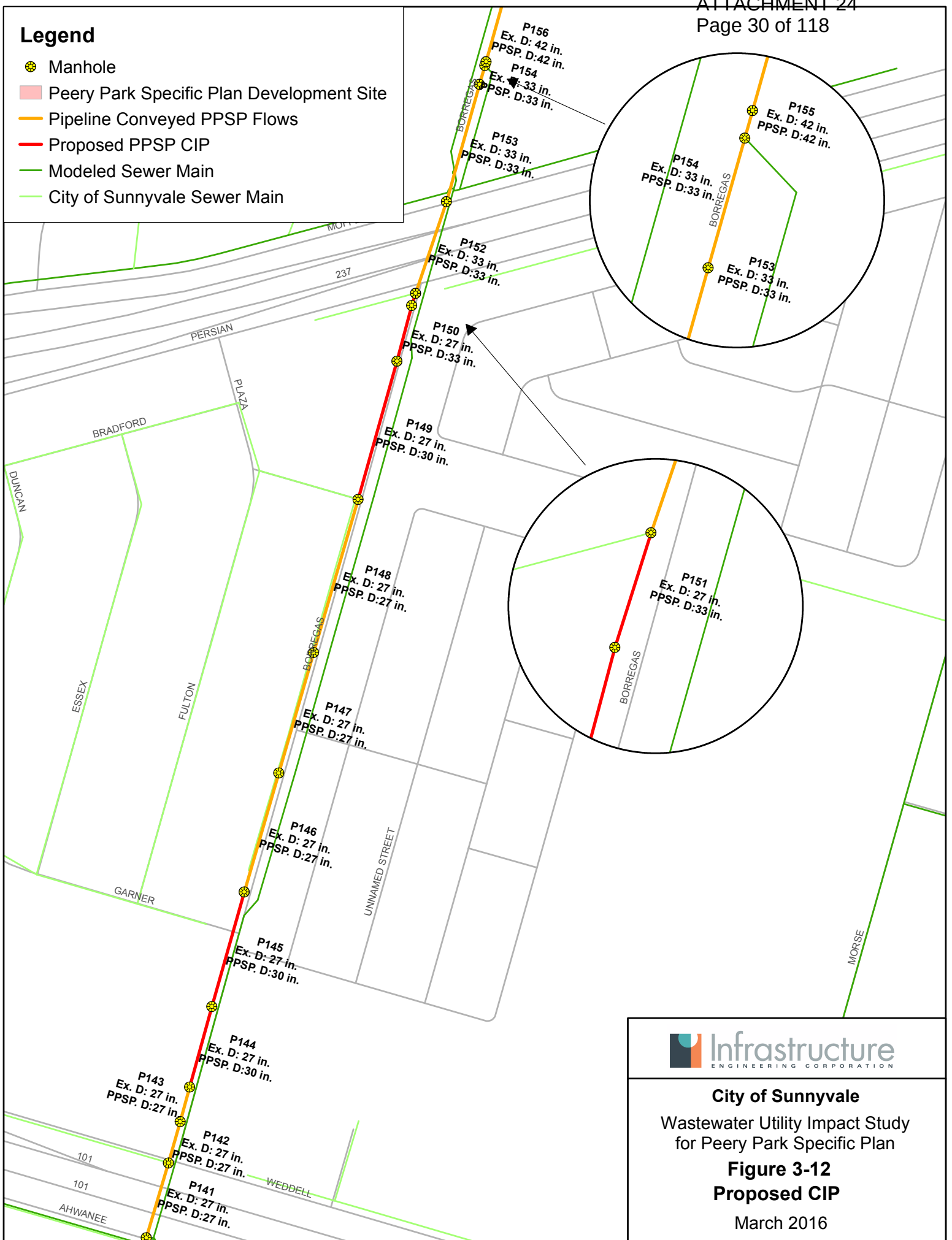
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-11
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Proposed PPSP CIP
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



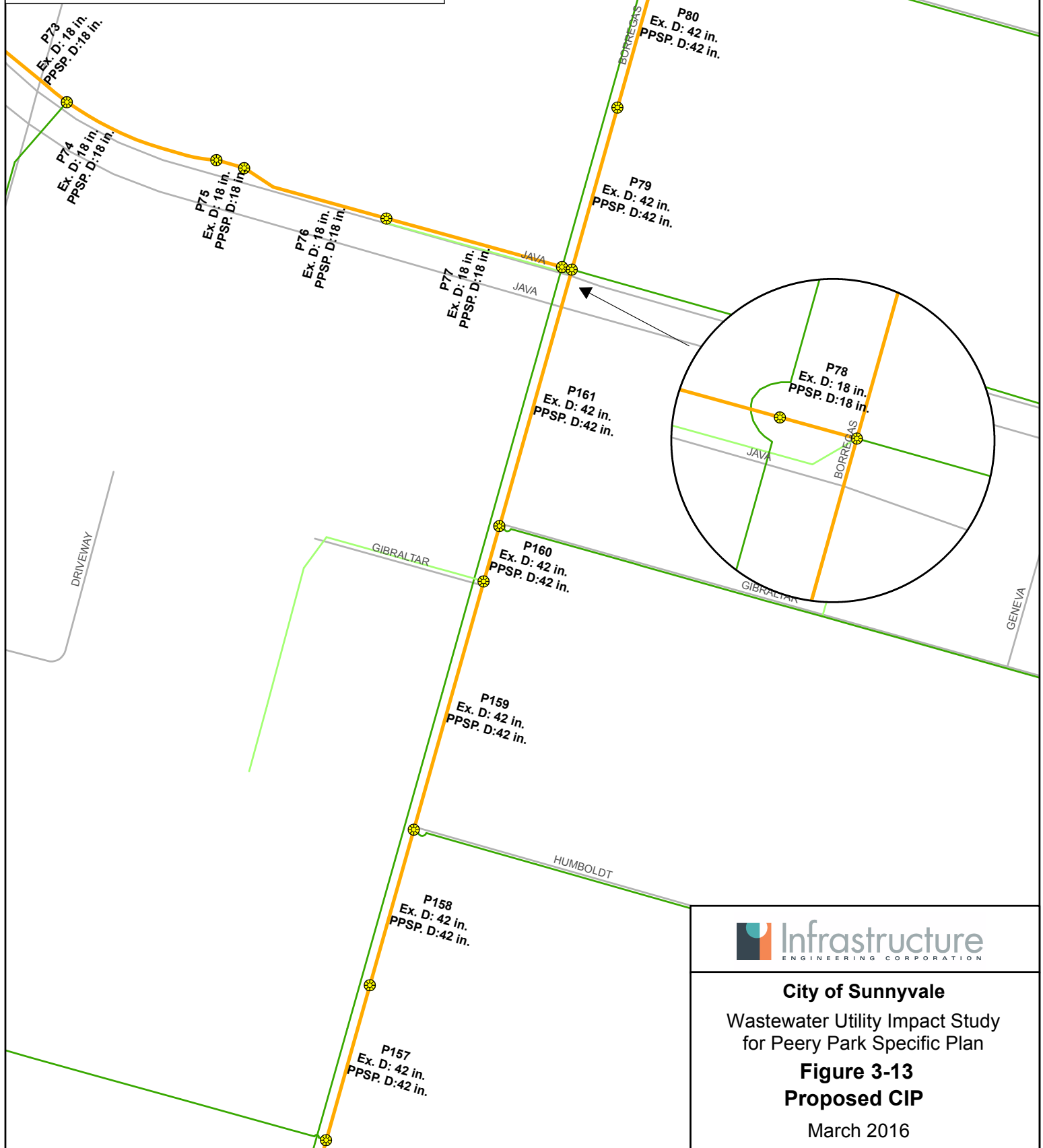
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-12
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-13
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



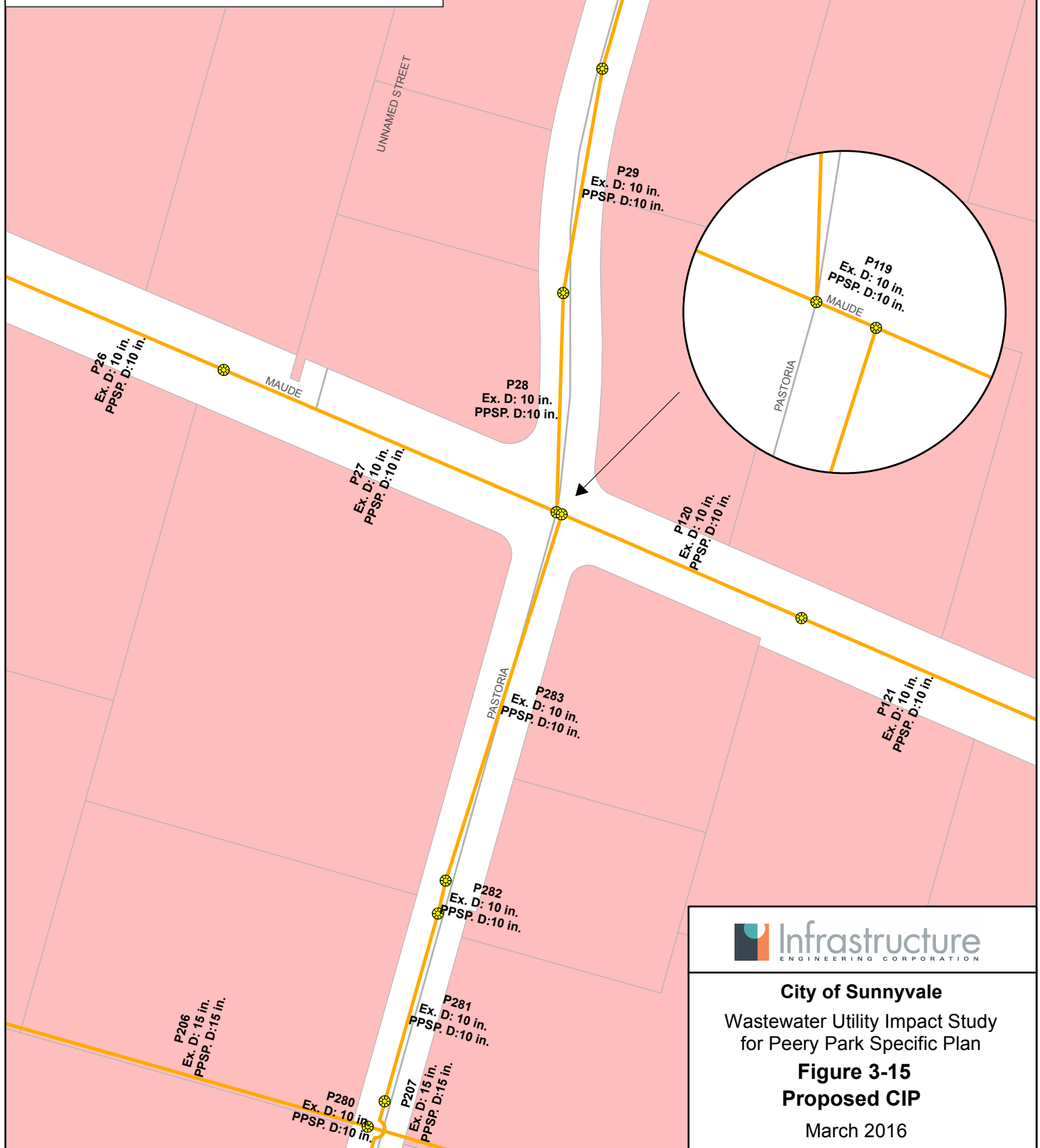
City of Sunnyvale
Wastewater Utility Impact Study
for Peery Park Specific Plan

Figure 3-14
Proposed CIP

March 2016

Legend

-  Manhole
-  Peery Park Specific Plan Development Site
-  Pipeline Conveyed PPSP Flows
-  Modeled Sewer Main
-  City of Sunnyvale Sewer Main



City of Sunnyvale
 Wastewater Utility Impact Study
 for Peery Park Specific Plan

Figure 3-15
Proposed CIP

March 2016

TECHNICAL MEMORANDUM

APPENDIX



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	0.982	0.53	1.508	0.74	2.898	1.00	1.531	0.53	3-2
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	0.976	0.56	1.501	0.59	2.923	1.00	1.512	0.58	3-2
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	2.051	0.81	3.017	0.93	3.826	1.00	1.551	1.00	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	2.052	0.72	3.018	0.80	3.825	1.00	1.552	0.97	3-11
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	2.051	0.66	3.016	0.91	3.804	1.00	1.548	0.77	3-11
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	0.596	0.51	0.901	0.66	1.392	1.00	1.485	0.62	3-9
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	0.582	0.51	0.880	0.66	1.365	1.00	1.462	0.62	3-9
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.414	0.40	0.622	0.50	1.171	1.00	1.152	0.76	3-8
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.402	0.38	0.603	0.48	1.121	1.00	1.096	0.72	3-7
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.208	0.38	0.306	0.48	0.542	1.00	0.536	0.74	3-7
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	0.568	0.50	0.859	0.65	1.327	1.00	1.429	0.61	3-9
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.540	0.49	0.816	0.63	1.279	1.00	1.381	0.60	3-9
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.414	0.42	0.622	0.53	1.146	1.00	1.146	0.82	3-8
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.540	0.48	0.816	0.62	1.278	1.00	1.379	0.59	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.540	0.48	0.816	0.62	1.275	1.00	1.377	0.59	3-9
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	0.582	0.50	0.880	0.65	1.355	1.00	1.455	0.61	3-9
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	0.568	0.50	0.859	0.65	1.330	1.00	1.432	0.61	3-9
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	0.568	0.50	0.859	0.64	1.324	1.00	1.427	0.61	3-9
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.421	0.42	0.632	0.54	1.118	1.00	1.180	0.54	3-8
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.421	0.42	0.632	0.52	1.123	1.00	1.173	0.53	3-8
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.414	0.39	0.622	0.49	1.136	1.00	1.154	0.67	3-8
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.410	0.40	0.616	0.50	1.132	1.00	1.132	0.76	3-8
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.410	0.37	0.615	0.47	1.128	1.00	1.128	0.70	3-8
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.512	0.47	0.772	0.61	1.230	1.00	1.331	0.58	3-9
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.442	0.45	0.664	0.58	1.129	1.00	1.212	0.57	3-8



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D.(in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	0.582	0.50	0.880	0.65	1.361	1.00	1.459	0.62	3-9
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.421	0.42	0.632	0.53	1.133	1.00	1.169	0.54	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.421	0.42	0.633	0.53	1.142	1.00	1.166	0.54	3-8
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.193	0.35	0.298	0.44	0.564	0.98	0.555	0.64	3-7
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	3.062	0.39	4.454	0.48	11.231	0.94	9.946	0.82	3-11
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	3.329	0.42	4.828	0.51	11.993	0.94	10.709	0.85	3-12
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	6.212	0.50	9.100	0.62	18.232	0.89	17.001	0.87	3-10
P162	S4320228-4320227XX	S432MNH0228XX	S432MNH0227XX	18	-	30.1	1.16	1.064	0.26	1.517	0.31	5.513	0.89	-	-	3-11
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	6.211	0.48	9.050	0.60	17.532	0.89	16.405	0.87	3-10
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	3.254	0.38	4.742	0.47	11.754	0.86	10.481	0.77	3-12
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	0.596	0.48	0.900	0.62	1.387	0.86	1.489	0.57	3-9
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	3.329	0.42	4.828	0.51	11.995	0.84	10.711	0.78	3-12
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	3.324	0.36	4.824	0.44	11.983	0.84	10.702	0.76	3-12
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	3.256	0.39	4.733	0.47	11.767	0.83	10.488	0.77	3-12
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	1.697	0.43	2.609	0.55	3.547	0.83	3.640	0.81	3-10
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	3.071	0.38	4.489	0.46	11.367	0.81	10.089	0.75	3-11
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	1.647	0.39	2.453	0.51	3.379	0.79	3.461	0.77	3-10
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	3.026	0.33	4.409	0.40	11.104	0.78	9.825	0.69	3-11
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.208	0.31	0.306	0.40	0.535	0.77	0.535	0.59	3-7
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	3.257	0.35	4.758	0.43	11.755	0.76	10.485	0.68	3-12
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	1.653	0.37	2.478	0.48	3.355	0.76	3.427	0.74	3-10
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	6.228	0.44	9.005	0.53	17.575	0.74	16.422	0.73	3-10
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	0.854	0.47	1.301	0.60	1.788	0.74	1.891	0.57	3-9
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	3.234	0.34	4.754	0.42	11.716	0.73	10.476	0.67	3-11
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	3.255	0.32	4.749	0.39	11.759	0.72	10.497	0.62	3-12



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.277	0.34	0.417	0.41	3.098	0.72	2.729	0.68	3-13
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	3.193	0.34	5.016	0.41	12.553	0.71	11.517	0.66	3-11
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.186	0.40	0.280	0.50	0.453	0.70	0.453	0.70	3-7
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.046	0.44	1.575	0.56	2.138	0.68	2.240	0.70	3-10
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	1.645	0.31	2.442	0.42	3.326	0.68	3.399	0.66	3-10
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	3.272	0.32	4.747	0.39	11.816	0.67	10.536	0.62	3-12
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	3.266	0.32	4.741	0.39	11.797	0.67	10.517	0.62	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	3.261	0.32	4.737	0.39	11.781	0.67	10.502	0.62	3-12
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.041	0.43	1.572	0.54	2.126	0.66	2.227	0.69	3-10
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.193	0.28	0.297	0.35	0.549	0.65	0.549	0.49	3-7
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	4.343	0.41	5.587	0.47	9.340	0.65	8.852	0.62	3-10
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.391	0.37	0.587	0.45	1.049	0.65	1.049	0.65	3-7
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	17.747	0.39	25.409	0.47	46.279	0.64	46.751	0.65	3-10
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.273	0.38	0.395	0.46	0.678	0.63	0.678	0.63	3-1
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.036	0.40	1.568	0.52	2.113	0.63	2.215	0.66	3-10
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	3.336	0.33	4.836	0.39	12.015	0.63	10.729	0.59	3-12
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	3.464	0.39	4.628	0.45	8.469	0.62	7.896	0.59	3-10
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.163	0.37	0.271	0.49	0.379	0.60	0.379	0.60	3-4
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	1.788	0.28	2.799	0.37	3.422	0.60	3.497	0.58	3-10
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	2.962	0.28	4.323	0.34	10.872	0.58	9.591	0.54	3-11
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.051	0.39	1.578	0.48	2.151	0.58	2.251	0.60	3-10
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.205	0.32	0.308	0.40	0.593	0.58	0.593	0.58	3-7
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.035	0.37	1.567	0.47	2.111	0.57	2.213	0.59	3-10
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.156	0.36	0.265	0.49	0.339	0.57	0.339	0.57	3-4
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	15.906	0.31	22.746	0.39	41.771	0.56	40.605	0.56	3-10



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D.(in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	1.871	0.33	2.769	0.40	5.100	0.56	5.100	0.56	3-2
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.163	0.35	0.272	0.46	0.376	0.56	0.376	0.56	3-5
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	0.907	0.23	1.310	0.28	7.518	0.56	8.082	0.55	3-11
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.156	0.35	0.264	0.47	0.343	0.55	0.343	0.55	3-5
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.161	0.34	0.269	0.45	0.369	0.55	0.369	0.55	3-5
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.030	0.36	1.563	0.46	2.097	0.54	2.200	0.56	3-10
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.156	0.35	0.265	0.46	0.341	0.54	0.341	0.54	3-4
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.027	0.36	1.561	0.45	2.090	0.54	2.192	0.56	3-10
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	1.267	0.31	1.984	0.39	3.562	0.54	3.562	0.54	3-1
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	1.809	0.28	2.850	0.36	3.506	0.53	3.570	0.52	3-10
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	4.649	0.29	6.658	0.36	14.253	0.53	12.982	0.52	3-10
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	1.940	0.30	2.870	0.36	6.500	0.53	5.882	0.50	3-10
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	1.778	0.31	2.651	0.38	4.740	0.52	4.740	0.52	3-1
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	1.962	0.21	2.818	0.25	7.918	0.52	8.199	0.54	3-2
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	0.865	0.35	1.311	0.43	1.818	0.52	1.921	0.54	3-9
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.273	0.31	0.395	0.37	0.678	0.52	0.678	0.52	3-1
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	0.903	0.17	1.306	0.20	7.504	0.52	8.093	0.54	3-11
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	1.781	0.30	2.654	0.37	4.752	0.51	4.752	0.51	3-1
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.120	0.34	0.204	0.46	0.250	0.51	0.250	0.51	3-4
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	1.734	0.30	2.591	0.37	4.640	0.51	4.640	0.51	3-1
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.120	0.34	0.204	0.46	0.251	0.51	0.251	0.51	3-4
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	1.797	0.30	2.670	0.36	4.804	0.51	4.804	0.51	3-2
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	1.264	0.29	1.981	0.37	3.551	0.51	3.551	0.51	3-1
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	1.738	0.30	2.595	0.37	4.652	0.51	4.652	0.51	3-1
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	1.793	0.29	2.666	0.36	4.791	0.50	4.791	0.50	3-2



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	0.863	0.33	1.310	0.42	1.813	0.50	1.916	0.52	3-9
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	1.785	0.29	2.658	0.36	4.765	0.50	4.765	0.50	3-1
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	1.789	0.29	2.662	0.36	4.778	0.50	4.778	0.50	3-2
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	1.888	0.29	2.787	0.36	5.189	0.50	5.189	0.50	3-2
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.314	0.30	0.448	0.36	0.802	0.50	0.802	0.50	3-2
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.208	0.29	0.306	0.35	0.530	0.50	0.530	0.48	3-7
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	1.960	0.29	2.892	0.36	5.337	0.50	5.337	0.50	3-2
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	1.953	0.25	2.809	0.30	4.390	0.50	4.967	0.52	3-2
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	3.392	0.25	4.907	0.31	12.184	0.49	10.896	0.46	3-12
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	1.887	0.28	2.786	0.35	5.177	0.49	5.177	0.49	3-2
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	1.964	0.29	2.896	0.36	5.350	0.49	6.453	0.51	3-2
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.316	0.29	0.451	0.35	0.811	0.49	0.811	0.49	3-2
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.156	0.32	0.265	0.42	0.338	0.49	0.338	0.49	3-4
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	1.884	0.28	2.783	0.34	5.167	0.48	5.167	0.48	3-2
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.131	0.32	0.219	0.42	0.272	0.48	0.272	0.48	3-4
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	1.955	0.28	2.887	0.34	5.320	0.48	5.320	0.48	3-2
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	3.399	0.25	4.914	0.30	12.205	0.48	10.916	0.45	3-13
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.165	0.30	0.273	0.38	0.385	0.47	0.385	0.47	3-4
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.272	0.29	0.394	0.35	0.674	0.47	0.674	0.47	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.268	0.29	0.389	0.35	0.652	0.47	0.652	0.47	3-1
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.208	0.28	0.306	0.34	0.529	0.46	0.529	0.46	3-7
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.086	0.27	0.135	0.34	0.237	0.46	0.237	0.46	3-5
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	1.261	0.26	1.978	0.33	3.538	0.46	3.538	0.46	3-1
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	3.839	0.24	5.528	0.29	12.966	0.45	11.676	0.42	3-13
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.313	0.27	0.447	0.33	0.793	0.45	0.793	0.45	3-1



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Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.120	0.30	0.204	0.40	0.247	0.45	0.247	0.45	3-4
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.128	0.30	0.217	0.40	0.265	0.45	0.265	0.45	3-4
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	4.241	0.24	6.099	0.29	13.701	0.44	12.395	0.42	3-13
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	0.682	0.29	1.017	0.35	1.558	0.44	1.558	0.44	3-1
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	4.406	0.24	6.347	0.29	13.906	0.44	12.621	0.42	3-13
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	4.231	0.24	6.089	0.29	13.855	0.44	12.506	0.42	3-13
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	3.463	0.23	4.998	0.28	12.327	0.44	11.038	0.41	3-13
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.128	0.29	0.217	0.39	0.268	0.43	0.268	0.43	3-4
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	1.744	0.26	2.603	0.32	4.662	0.43	4.662	0.43	3-1
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	0.893	0.25	1.332	0.31	2.382	0.43	2.382	0.43	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	0.883	0.25	1.318	0.31	2.355	0.43	2.355	0.43	3-1
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.309	0.27	0.441	0.32	0.754	0.43	0.754	0.43	3-1
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	4.417	0.24	6.357	0.29	13.935	0.43	12.648	0.41	3-14
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	3.671	0.23	5.292	0.27	12.685	0.43	11.392	0.40	3-13
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	3.584	0.22	5.160	0.27	12.542	0.42	11.248	0.40	3-13
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.083	0.25	0.131	0.31	0.228	0.42	0.228	0.42	3-4
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.225	0.27	0.333	0.33	0.515	0.42	0.515	0.42	3-1
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	1.774	0.25	2.647	0.31	4.718	0.42	4.718	0.42	3-1
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.088	0.25	0.136	0.31	0.244	0.42	0.244	0.42	3-15
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.256	0.27	0.373	0.32	0.606	0.42	0.606	0.42	3-1
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	3.486	0.22	5.028	0.26	12.374	0.42	11.083	0.39	3-13
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.219	0.27	0.326	0.33	0.499	0.42	0.499	0.42	3-1
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	3.343	0.22	4.843	0.26	12.036	0.41	10.749	0.39	3-12
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.122	0.24	0.182	0.29	0.350	0.41	0.350	0.41	3-6
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.311	0.25	0.444	0.30	0.786	0.41	0.786	0.41	3-1



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Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.229	0.26	0.339	0.32	0.527	0.41	0.527	0.41	3-1
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.153	0.25	0.219	0.30	0.375	0.40	0.375	0.40	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.155	0.25	0.221	0.30	0.378	0.40	0.378	0.40	3-1
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.247	0.25	0.362	0.31	0.582	0.40	0.582	0.40	3-1
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.062	0.23	0.093	0.28	0.187	0.40	0.187	0.40	3-6
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	3.342	0.22	4.842	0.26	12.033	0.39	10.747	0.37	3-12
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.183	0.24	0.281	0.29	0.527	0.39	0.527	0.39	3-7
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.193	0.24	0.297	0.29	0.542	0.38	0.542	0.38	3-7
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	0.463	0.25	0.691	0.30	1.065	0.38	1.065	0.38	3-1
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.257	0.24	0.374	0.29	0.612	0.38	0.612	0.38	3-1
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.059	0.22	0.089	0.27	0.159	0.37	0.159	0.37	3-6
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.183	0.24	0.275	0.29	0.438	0.37	0.438	0.37	3-7
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.186	0.23	0.282	0.28	0.475	0.37	0.475	0.37	3-7
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.088	0.22	0.136	0.27	0.247	0.37	0.247	0.37	3-15
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.004	0.20	0.008	0.27	0.027	0.37	0.027	0.37	3-5
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.186	0.23	0.280	0.29	0.449	0.37	0.449	0.37	3-7
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.070	0.21	0.102	0.25	0.283	0.37	0.283	0.37	3-2
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.052	0.22	0.085	0.28	0.126	0.36	0.126	0.36	3-4
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.064	0.20	0.097	0.25	0.205	0.36	0.205	0.36	3-6
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.135	0.22	0.203	0.27	0.367	0.36	0.367	0.36	3-7
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.091	0.21	0.140	0.26	0.255	0.36	0.255	0.36	3-15
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.186	0.23	0.280	0.28	0.450	0.36	0.450	0.36	3-7
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.183	0.23	0.275	0.28	0.440	0.36	0.440	0.36	3-7
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.186	0.20	0.278	0.25	0.561	0.35	0.561	0.35	3-6
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.183	0.21	0.281	0.25	0.523	0.35	0.523	0.35	3-7



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D.(in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.274	0.15	0.414	0.19	0.496	0.34	0.501	0.31	3-13
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.184	0.21	0.280	0.26	0.460	0.34	0.460	0.34	3-7
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.186	0.21	0.282	0.25	0.477	0.34	0.477	0.34	3-7
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.177	0.21	0.271	0.25	0.434	0.32	0.434	0.32	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.180	0.21	0.275	0.25	0.442	0.32	0.442	0.32	3-5
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.092	0.19	0.142	0.23	0.261	0.32	0.261	0.32	3-6
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.182	0.19	0.278	0.23	0.453	0.30	0.453	0.30	3-6
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.135	0.18	0.203	0.22	0.362	0.30	0.362	0.30	3-7
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.031	0.17	0.047	0.21	0.102	0.28	0.102	0.28	3-4
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.046	0.17	0.072	0.21	0.140	0.28	0.140	0.28	3-3
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.045	0.17	0.071	0.21	0.124	0.28	0.124	0.28	3-3
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.180	0.18	0.275	0.22	0.446	0.28	0.446	0.28	3-5
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.135	0.17	0.203	0.21	0.361	0.28	0.361	0.28	3-7
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.045	0.16	0.071	0.20	0.123	0.27	0.123	0.27	3-3
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.045	0.16	0.071	0.20	0.122	0.27	0.122	0.27	3-3
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.143	0.17	0.231	0.21	0.356	0.27	0.356	0.27	3-5
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.059	0.15	0.089	0.19	0.172	0.26	0.172	0.26	3-6
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.138	0.16	0.225	0.21	0.340	0.26	0.340	0.26	3-4
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.049	0.15	0.073	0.18	0.157	0.26	0.157	0.26	3-6
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.045	0.15	0.071	0.19	0.129	0.26	0.129	0.26	3-3
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.062	0.15	0.093	0.18	0.186	0.25	0.186	0.25	3-6
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.140	0.16	0.227	0.20	0.348	0.25	0.348	0.25	3-5
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.058	0.15	0.088	0.18	0.171	0.25	0.171	0.25	3-6
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.050	0.15	0.077	0.18	0.150	0.25	0.150	0.25	3-3
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.052	0.15	0.080	0.18	0.153	0.25	0.153	0.25	3-6



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.198	0.19	0.298	0.24	0.342	0.25	0.342	0.25	3-13
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.060	0.15	0.090	0.18	0.179	0.25	0.179	0.25	3-6
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.060	0.15	0.091	0.18	0.176	0.25	0.176	0.25	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.041	0.14	0.063	0.18	0.122	0.25	0.122	0.25	3-6
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.020	0.16	0.035	0.22	0.046	0.25	0.046	0.25	3-4
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.047	0.14	0.071	0.17	0.149	0.24	0.149	0.24	3-6
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.044	0.13	0.067	0.17	0.140	0.24	0.140	0.24	3-6
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.031	0.12	0.046	0.15	0.126	0.24	0.126	0.24	3-2
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.053	0.14	0.081	0.17	0.159	0.24	0.159	0.24	3-6
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.042	0.13	0.064	0.16	0.133	0.23	0.133	0.23	3-6
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.033	0.15	0.051	0.18	0.076	0.23	0.076	0.23	3-5
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.060	0.13	0.091	0.16	0.176	0.23	0.176	0.23	3-6
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.045	0.13	0.071	0.16	0.134	0.23	0.134	0.23	3-3
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.195	0.17	0.295	0.21	0.334	0.22	0.334	0.22	3-13
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.194	0.17	0.294	0.21	0.331	0.22	0.331	0.22	3-9
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.006	0.13	0.010	0.16	0.038	0.21	0.038	0.21	3-4
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.026	0.13	0.039	0.16	0.073	0.20	0.073	0.20	3-4
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.039	0.10	0.057	0.12	0.153	0.20	0.153	0.20	3-2
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.070	0.10	0.102	0.12	0.281	0.20	0.281	0.20	3-2
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.031	0.10	0.046	0.12	0.124	0.19	0.124	0.19	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.039	0.10	0.058	0.12	0.143	0.18	0.143	0.18	3-2
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.036	0.10	0.052	0.12	0.138	0.18	0.138	0.18	3-2
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.006	0.09	0.009	0.11	0.024	0.18	0.024	0.18	3-3
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.005	0.10	0.007	0.12	0.020	0.18	0.020	0.18	3-3
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.031	0.12	0.048	0.14	0.070	0.17	0.070	0.17	3-5



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.003	0.09	0.004	0.11	0.012	0.17	0.012	0.17	3-3
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.034	0.09	0.049	0.10	0.128	0.17	0.128	0.17	3-2
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.027	0.09	0.041	0.11	0.093	0.16	0.093	0.16	3-4
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.008	0.07	0.012	0.08	0.046	0.16	0.046	0.16	3-2
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.003	0.07	0.005	0.09	0.019	0.16	0.019	0.16	3-3
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.006	0.07	0.010	0.08	0.041	0.16	0.041	0.16	3-2
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.027	0.09	0.041	0.11	0.089	0.16	0.089	0.16	3-3
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.005	0.06	0.007	0.07	0.035	0.16	0.035	0.16	3-2
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.028	0.11	0.043	0.13	0.061	0.15	0.061	0.15	3-5
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.008	0.06	0.012	0.08	0.050	0.15	0.050	0.15	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.008	0.07	0.012	0.08	0.046	0.15	0.046	0.15	3-2
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.003	0.07	0.005	0.08	0.015	0.15	0.015	0.15	3-3
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.08	0.000	0.10	0.003	0.15	0.003	0.15	3-6
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.006	0.07	0.010	0.08	0.036	0.15	0.036	0.15	3-4
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.003	0.05	0.004	0.07	0.017	0.15	0.017	0.15	3-5
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.022	0.11	0.034	0.13	0.042	0.15	0.042	0.15	3-5
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.027	0.08	0.040	0.09	0.111	0.15	0.111	0.15	3-2
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.027	0.08	0.040	0.10	0.094	0.15	0.094	0.15	3-3
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.11	0.008	0.13	0.028	0.14	0.028	0.14	3-9
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.027	0.07	0.040	0.09	0.107	0.14	0.107	0.14	3-3
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.026	0.09	0.039	0.11	0.071	0.14	0.071	0.14	3-4
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.028	0.08	0.039	0.09	0.095	0.14	0.095	0.14	3-3
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.002	0.05	0.004	0.06	0.028	0.14	0.028	0.14	3-15
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.026	0.08	0.037	0.09	0.087	0.14	0.087	0.14	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.026	0.08	0.039	0.10	0.069	0.14	0.069	0.14	3-4



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Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.006	0.06	0.009	0.07	0.033	0.14	0.033	0.14	3-4
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.028	0.08	0.039	0.09	0.093	0.13	0.093	0.13	3-3
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.027	0.07	0.040	0.08	0.107	0.13	0.107	0.13	3-3
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.006	0.06	0.009	0.07	0.032	0.13	0.032	0.13	3-3
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.025	0.08	0.038	0.09	0.083	0.13	0.083	0.13	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.026	0.08	0.037	0.09	0.080	0.13	0.080	0.13	3-3
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.006	0.06	0.010	0.07	0.038	0.13	0.038	0.13	3-4
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.009	0.08	0.014	0.10	0.020	0.13	0.020	0.13	3-3
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.026	0.08	0.039	0.10	0.066	0.13	0.066	0.13	3-4
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.002	0.04	0.004	0.05	0.024	0.13	0.024	0.13	3-15
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.027	0.06	0.040	0.08	0.100	0.12	0.100	0.12	3-3
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.013	0.08	0.023	0.09	0.039	0.12	0.039	0.12	3-4
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.005	0.06	0.008	0.07	0.027	0.12	0.027	0.12	3-3
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.005	0.08	0.008	0.10	0.017	0.12	0.017	0.12	3-5
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.020	0.08	0.031	0.09	0.053	0.12	0.053	0.12	3-4
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.003	0.05	0.004	0.06	0.014	0.12	0.014	0.12	3-5
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.007	0.05	0.011	0.06	0.034	0.11	0.034	0.11	3-6
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.013	0.08	0.023	0.10	0.029	0.11	0.029	0.11	3-4
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.008	0.06	0.012	0.08	0.022	0.11	0.022	0.11	3-7
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.002	0.04	0.003	0.04	0.017	0.11	0.017	0.11	3-3
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.013	0.07	0.023	0.09	0.035	0.11	0.035	0.11	3-4
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.003	0.07	0.004	0.08	0.012	0.10	0.012	0.10	3-5
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.013	0.07	0.023	0.09	0.031	0.10	0.031	0.10	3-4
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.005	0.05	0.008	0.06	0.027	0.10	0.027	0.10	3-6
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.008	0.06	0.012	0.08	0.019	0.10	0.019	0.10	3-7



Table A-1 Model Results for Existing (2015) Flows without the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.006	0.07	0.010	0.09	0.013	0.10	0.013	0.10	3-3
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.008	0.06	0.012	0.08	0.017	0.10	0.017	0.10	3-7
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.008	0.05	0.012	0.06	0.032	0.09	0.032	0.09	3-7
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.002	0.03	0.003	0.04	0.017	0.09	0.017	0.09	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.000	0.03	0.000	0.03	0.005	0.09	0.005	0.09	3-5
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.003	0.04	0.005	0.05	0.019	0.09	0.019	0.09	3-6
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.003	0.04	0.005	0.05	0.009	0.09	0.009	0.09	3-3
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.002	0.03	0.003	0.04	0.014	0.08	0.014	0.08	3-3
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.005	0.06	0.008	0.07	0.011	0.08	0.011	0.08	3-7
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.003	0.03	0.004	0.04	0.013	0.07	0.013	0.07	3-6
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.000	0.03	0.000	0.04	0.005	0.07	0.005	0.07	3-7
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.004	0.04	0.007	0.05	0.012	0.07	0.012	0.07	3-5
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.001	0.03	0.001	0.04	0.005	0.07	0.005	0.07	3-5
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.003	0.04	0.004	0.04	0.010	0.07	0.010	0.07	3-3
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	0.014	0.06	3-9
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.001	0.03	0.002	0.04	0.005	0.06	0.005	0.06	3-5
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.000	0.02	0.000	0.03	0.005	0.06	0.005	0.06	3-6
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.000	0.01	0.000	0.01	0.001	0.03	0.001	0.03	3-7
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.00	0.000	0.01	0.000	0.02	0.000	0.02	3-6
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.000	0.01	0.000	0.01	0.000	0.01	0.000	0.01	3-7
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with existing diameter.
2. Pipeline was analyzed with WWMP CIP diameter.
3. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	0.988	0.54	1.517	0.76	2.908	1.00	1.539	0.53	3-2
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	0.982	0.56	1.510	0.59	2.962	1.00	1.521	0.58	3-2
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	2.135	0.82	3.118	0.94	3.834	1.00	1.561	1.00	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	2.136	0.73	3.118	0.81	3.828	1.00	1.562	0.98	3-11
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	2.135	0.68	3.117	0.94	3.801	1.00	1.557	0.77	3-11
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	1.005	0.73	1.360	0.99	1.792	1.00	2.019	0.79	3-9
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	0.991	0.72	1.338	1.00	1.769	1.00	1.996	0.79	3-9
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.001	0.02	0.001	0.02	0.211	1.00	0.002	0.03	3-7
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.823	0.60	1.209	1.00	1.465	1.00	1.690	0.98	3-8
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.808	0.58	1.223	1.00	1.589	1.00	1.635	1.00	3-7
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.408	0.59	0.597	1.00	0.641	1.00	0.655	1.00	3-7
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.480	0.49	0.719	0.65	1.002	1.00	0.970	0.71	3-7
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.447	0.31	0.668	0.39	0.986	1.00	0.915	0.46	3-6
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.300	0.29	0.446	0.36	0.610	1.00	0.599	0.44	3-7
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.308	0.30	0.458	0.37	0.619	1.00	0.613	0.73	3-7
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.297	0.30	0.442	0.37	0.606	1.00	0.592	0.44	3-7
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.313	0.29	0.466	0.36	0.626	1.00	0.622	1.00	3-7
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.408	0.41	0.591	0.91	0.618	1.00	0.648	1.00	3-7
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.407	0.40	0.591	0.64	0.638	1.00	0.665	1.00	3-7
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.005	0.06	0.009	0.07	0.146	1.00	0.011	0.08	3-7
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	0.977	0.71	1.317	1.00	1.733	1.00	1.963	0.77	3-9
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.142	0.22	0.214	0.27	0.884	1.00	0.287	0.32	3-6
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.223	0.34	0.339	0.42	1.175	1.00	0.430	0.50	3-6
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.224	0.33	0.329	0.41	0.702	1.00	0.483	0.51	3-6
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.142	0.20	0.214	0.25	1.273	1.00	0.288	0.29	3-6



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.796	0.54	1.188	0.71	1.549	1.00	1.596	1.00	3-7
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.389	0.34	0.597	0.45	0.981	1.00	1.023	1.00	3-7
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.389	0.30	0.597	0.37	0.989	1.00	1.021	1.00	3-7
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.009	0.07	0.013	0.08	0.249	1.00	0.024	0.11	3-7
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.009	0.07	0.013	0.08	0.252	1.00	0.021	0.10	3-7
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.949	0.70	1.275	1.00	1.682	1.00	1.914	0.76	3-9
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.313	0.58	0.466	0.71	0.633	1.00	0.635	1.00	3-7
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.400	0.52	0.622	1.00	1.014	1.00	1.051	1.00	3-7
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.823	0.64	1.203	1.00	1.461	1.00	1.685	1.00	3-8
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.001	0.04	0.001	0.05	0.227	1.00	0.006	0.07	3-7
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.009	0.05	0.016	0.17	0.416	1.00	0.034	0.55	3-7
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.949	0.69	1.275	1.00	1.679	1.00	1.912	0.75	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.949	0.69	1.275	1.00	1.677	1.00	1.910	0.75	3-9
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	0.991	0.71	1.339	1.00	1.760	1.00	1.989	0.78	3-9
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	0.977	0.71	1.317	1.00	1.736	1.00	1.966	0.78	3-9
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	0.977	0.71	1.317	1.00	1.729	1.00	1.960	0.77	3-9
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.830	0.64	1.125	1.00	1.484	1.00	1.707	0.69	3-8
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.830	0.62	1.129	1.00	1.480	1.00	1.703	0.68	3-8
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.823	0.58	1.166	1.00	1.465	1.00	1.686	0.91	3-8
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.001	0.02	0.001	0.02	0.140	1.00	0.001	0.02	3-7
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.819	0.60	1.207	1.00	1.449	1.00	1.672	1.00	3-8
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.818	0.56	1.207	1.00	1.448	1.00	1.668	1.00	3-8
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.408	0.48	0.592	1.00	0.621	1.00	0.651	1.00	3-7
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.399	0.33	0.613	0.54	0.995	1.00	1.041	1.00	3-7
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.399	0.41	0.613	0.76	1.004	1.00	1.045	1.00	3-7



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.239	0.23	0.352	0.28	0.559	1.00	0.495	0.33	3-7
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.239	0.24	0.352	0.29	0.494	1.00	0.496	0.35	3-7
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.009	0.07	0.013	0.08	0.254	1.00	0.018	0.10	3-7
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.240	0.29	0.354	0.36	0.499	1.00	0.503	0.43	3-7
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.334	0.28	0.492	0.34	0.707	1.00	0.668	0.40	3-7
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.112	0.30	0.165	0.37	0.415	1.00	0.249	0.46	3-6
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.111	0.20	0.164	0.24	0.365	1.00	0.248	0.30	3-6
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.105	0.29	0.155	0.35	0.475	1.00	0.218	0.44	3-6
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.334	0.31	0.492	0.38	0.675	1.00	0.666	0.44	3-7
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.921	0.68	1.239	1.00	1.631	1.00	1.865	0.74	3-9
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.851	0.66	1.150	1.00	1.513	1.00	1.742	0.72	3-8
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	0.991	0.72	1.339	1.00	1.765	1.00	1.993	0.78	3-9
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.830	0.63	1.143	1.00	1.477	1.00	1.700	0.69	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.830	0.63	1.163	1.00	1.476	1.00	1.698	0.69	3-8
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	3.250	0.40	4.687	0.49	11.444	0.94	10.213	0.84	3-11
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	3.557	0.43	5.123	0.53	12.266	0.94	10.986	0.87	3-12
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	1.005	0.65	1.359	0.85	1.797	0.93	2.024	0.70	3-9
P162	S4320228-4320227XX	S432MNH0228XX	S432MNH0227XX	18	-	30.1	1.16	1.141	0.27	1.609	0.31	5.534	0.89	-	-	3-11
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	3.483	0.40	5.040	0.48	12.028	0.88	10.795	0.79	3-12
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	6.853	0.52	9.612	0.63	17.974	0.88	16.969	0.87	3-10
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	6.851	0.50	9.614	0.61	17.806	0.87	16.821	0.86	3-10
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	1.263	0.59	1.760	0.73	2.183	0.85	2.425	0.67	3-9
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	3.557	0.43	5.123	0.52	12.268	0.85	10.987	0.80	3-12
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	3.552	0.38	5.118	0.46	12.256	0.84	10.984	0.77	3-12
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	3.484	0.40	5.029	0.49	12.041	0.84	10.800	0.79	3-12



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	2.112	0.44	2.973	0.56	3.893	0.82	4.178	0.81	3-10
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	3.265	0.39	4.728	0.48	11.535	0.82	10.361	0.76	3-11
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	3.487	0.36	5.062	0.44	12.024	0.79	10.802	0.69	3-12
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	3.214	0.34	4.642	0.42	11.319	0.78	10.212	0.71	3-11
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	2.059	0.41	2.880	0.52	3.743	0.78	4.015	0.77	3-10
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.455	0.53	2.025	0.65	2.528	0.77	2.773	0.84	3-10
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.450	0.52	2.024	0.64	2.517	0.76	2.761	0.83	3-10
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	3.484	0.33	5.050	0.41	12.026	0.76	10.813	0.64	3-12
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	2.073	0.39	2.920	0.50	3.724	0.75	3.984	0.74	3-10
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	6.868	0.45	9.632	0.54	18.175	0.75	17.192	0.74	3-10
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	3.471	0.35	5.067	0.43	11.972	0.75	10.791	0.68	3-11
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.445	0.49	2.021	0.61	2.505	0.72	2.749	0.80	3-10
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.277	0.35	0.417	0.42	3.148	0.72	2.836	0.69	3-13
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	3.488	0.35	5.396	0.43	12.638	0.71	11.832	0.67	3-11
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.246	0.46	0.358	0.58	0.473	0.70	0.473	0.70	3-4
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.323	0.29	0.475	0.35	0.639	0.69	0.639	0.41	3-7
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	3.500	0.33	5.041	0.40	12.090	0.69	10.839	0.63	3-12
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	3.494	0.33	5.036	0.40	12.071	0.68	10.824	0.63	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	3.489	0.33	5.032	0.40	12.056	0.68	10.812	0.63	3-12
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	2.064	0.34	2.878	0.44	3.697	0.68	3.956	0.67	3-10
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.122	0.23	0.183	0.28	0.254	0.65	0.254	0.33	3-6
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	4.496	0.42	5.761	0.48	9.440	0.65	8.949	0.63	3-10
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.444	0.45	2.022	0.56	2.504	0.65	2.748	0.71	3-10
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.223	0.44	0.329	0.56	0.408	0.65	0.408	0.65	3-4
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	18.395	0.40	26.182	0.48	46.990	0.65	47.614	0.65	3-10



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.246	0.44	0.358	0.54	0.471	0.65	0.471	0.65	3-5
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.460	0.46	2.024	0.56	2.539	0.64	2.784	0.68	3-10
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.109	0.19	0.161	0.23	0.241	0.64	0.241	0.29	3-6
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.279	0.38	0.405	0.47	0.687	0.64	0.687	0.64	3-1
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	3.564	0.34	5.131	0.40	12.288	0.64	11.005	0.60	3-12
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.236	0.43	0.343	0.53	0.453	0.63	0.453	0.63	3-5
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.223	0.43	0.329	0.53	0.412	0.63	0.412	0.63	3-5
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	3.602	0.40	4.792	0.46	8.591	0.62	8.011	0.60	3-10
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.223	0.42	0.329	0.53	0.411	0.62	0.411	0.62	3-4
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.439	0.44	2.020	0.53	2.491	0.61	2.735	0.65	3-10
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.436	0.43	2.017	0.53	2.483	0.60	2.727	0.64	3-10
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	2.276	0.31	3.226	0.40	4.105	0.60	4.217	0.59	3-10
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.183	0.43	0.266	0.53	0.316	0.59	0.316	0.59	3-4
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	3.113	0.29	4.507	0.35	11.038	0.59	10.030	0.55	3-11
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.183	0.43	0.266	0.53	0.318	0.59	0.318	0.59	3-4
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.008	0.06	0.013	0.07	0.115	0.59	0.036	0.12	3-6
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	1.274	0.42	1.768	0.51	2.212	0.58	2.456	0.62	3-9
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	1.958	0.34	2.880	0.41	5.215	0.57	5.215	0.57	3-2
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.166	0.38	0.245	0.47	0.342	0.57	0.342	0.57	3-5
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	16.545	0.32	23.499	0.40	42.312	0.57	41.448	0.57	3-10
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	0.975	0.24	1.394	0.29	7.682	0.56	8.527	0.56	3-11
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	1.272	0.41	1.768	0.49	2.207	0.56	2.451	0.60	3-9
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.249	0.38	0.361	0.47	0.482	0.55	0.482	0.55	3-4
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.223	0.38	0.329	0.48	0.407	0.54	0.407	0.54	3-4
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.193	0.39	0.281	0.48	0.339	0.54	0.339	0.54	3-4



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Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	2.289	0.31	3.352	0.39	3.879	0.54	4.131	0.54	3-10
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	1.267	0.31	1.985	0.39	3.563	0.54	3.563	0.54	3-1
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	2.046	0.31	3.007	0.37	6.634	0.53	6.016	0.51	3-10
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	4.880	0.30	6.951	0.37	14.523	0.53	13.265	0.52	3-10
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	1.798	0.31	2.678	0.38	4.767	0.53	4.767	0.53	3-1
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	2.107	0.22	2.994	0.26	8.072	0.53	8.695	0.56	3-2
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.279	0.31	0.405	0.38	0.686	0.52	0.686	0.52	3-1
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	0.971	0.18	1.390	0.21	7.668	0.52	8.613	0.56	3-11
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.174	0.35	0.256	0.43	0.357	0.52	0.357	0.52	3-15
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	1.801	0.30	2.681	0.37	4.779	0.52	4.779	0.52	3-1
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.183	0.38	0.266	0.46	0.314	0.52	0.314	0.52	3-4
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	1.817	0.30	2.697	0.37	4.831	0.51	4.831	0.51	3-2
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	1.749	0.30	2.610	0.37	4.659	0.51	4.659	0.51	3-1
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	2.042	0.30	2.986	0.37	5.394	0.51	5.394	0.51	3-2
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	1.264	0.29	1.982	0.37	3.551	0.51	3.551	0.51	3-1
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	2.115	0.31	3.091	0.37	5.541	0.51	5.541	0.51	3-2
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	1.753	0.30	2.614	0.37	4.672	0.51	4.672	0.51	3-1
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.142	0.34	0.208	0.41	0.303	0.51	0.303	0.51	3-4
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.191	0.37	0.279	0.46	0.331	0.50	0.331	0.50	3-4
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	2.041	0.30	2.985	0.36	5.381	0.50	5.381	0.50	3-2
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	1.813	0.30	2.693	0.36	4.818	0.50	4.818	0.50	3-2
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	2.098	0.26	2.985	0.31	4.546	0.50	5.123	0.53	3-2
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.321	0.30	0.459	0.36	0.811	0.50	0.811	0.50	3-2
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	1.805	0.30	2.685	0.36	4.792	0.50	4.792	0.50	3-1
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	1.809	0.29	2.689	0.36	4.805	0.50	4.805	0.50	3-2



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	2.119	0.30	3.095	0.37	5.554	0.50	6.502	0.50	3-2
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	3.620	0.26	5.202	0.32	12.456	0.50	11.169	0.47	3-12
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.191	0.36	0.279	0.44	0.335	0.49	0.335	0.49	3-4
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	2.038	0.29	2.982	0.35	5.371	0.49	5.371	0.49	3-2
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.323	0.30	0.461	0.36	0.820	0.49	0.820	0.49	3-2
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	2.110	0.29	3.087	0.36	5.524	0.49	5.524	0.49	3-2
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	3.627	0.26	5.209	0.31	12.478	0.48	11.188	0.46	3-13
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.279	0.29	0.404	0.36	0.682	0.48	0.682	0.48	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.275	0.29	0.399	0.36	0.661	0.47	0.661	0.47	3-1
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	1.261	0.26	1.979	0.33	3.539	0.46	3.539	0.46	3-1
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	4.067	0.25	5.823	0.29	13.240	0.45	11.952	0.43	3-13
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.174	0.31	0.256	0.37	0.359	0.45	0.359	0.45	3-15
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.320	0.27	0.457	0.33	0.802	0.45	0.802	0.45	3-1
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	4.469	0.25	6.390	0.30	13.979	0.45	12.680	0.43	3-13
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	0.703	0.29	1.049	0.36	1.585	0.45	1.585	0.45	3-1
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	4.634	0.25	6.638	0.30	14.180	0.45	12.906	0.42	3-13
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	4.459	0.25	6.381	0.29	14.147	0.45	12.800	0.42	3-13
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	3.692	0.24	5.292	0.28	12.600	0.45	11.310	0.42	3-13
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.012	0.26	0.021	0.34	0.038	0.44	0.038	0.44	3-5
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.177	0.30	0.261	0.36	0.367	0.44	0.367	0.44	3-15
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	1.765	0.26	2.630	0.32	4.690	0.43	4.690	0.43	3-1
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	3.899	0.23	5.587	0.28	12.959	0.43	11.664	0.41	3-13
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	4.645	0.25	6.649	0.29	14.209	0.43	12.934	0.41	3-14
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	0.904	0.26	1.346	0.31	2.395	0.43	2.395	0.43	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	0.894	0.26	1.331	0.31	2.369	0.43	2.369	0.43	3-1



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.315	0.27	0.452	0.32	0.763	0.43	0.763	0.43	3-1
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.094	0.30	0.136	0.36	0.176	0.43	0.176	0.43	3-4
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	3.812	0.23	5.455	0.27	12.816	0.43	11.520	0.40	3-13
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.232	0.28	0.344	0.34	0.523	0.42	0.523	0.42	3-1
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	3.714	0.22	5.322	0.27	12.647	0.42	11.356	0.40	3-13
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	1.794	0.25	2.675	0.31	4.745	0.42	4.745	0.42	3-1
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.263	0.27	0.384	0.33	0.614	0.42	0.614	0.42	3-1
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.226	0.27	0.336	0.33	0.508	0.42	0.508	0.42	3-1
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	3.571	0.22	5.138	0.27	12.309	0.42	11.023	0.40	3-12
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.317	0.25	0.454	0.31	0.794	0.41	0.794	0.41	3-1
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.236	0.27	0.349	0.32	0.535	0.41	0.535	0.41	3-1
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.254	0.26	0.372	0.31	0.591	0.40	0.591	0.40	3-1
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.157	0.25	0.224	0.31	0.379	0.40	0.379	0.40	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.158	0.25	0.226	0.31	0.383	0.40	0.383	0.40	3-1
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	3.570	0.22	5.137	0.26	12.306	0.40	11.020	0.38	3-12
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	0.477	0.25	0.713	0.31	1.083	0.39	1.083	0.39	3-1
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.179	0.26	0.263	0.32	0.372	0.39	0.372	0.39	3-6
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.263	0.24	0.385	0.30	0.621	0.38	0.621	0.38	3-1
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.296	0.27	0.433	0.33	0.586	0.38	0.586	0.38	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.305	0.27	0.447	0.33	0.602	0.38	0.602	0.38	3-5
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.137	0.22	0.205	0.27	0.371	0.38	0.371	0.38	3-2
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.321	0.25	0.472	0.31	0.634	0.36	0.634	0.36	3-6
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.274	0.15	0.414	0.19	0.495	0.35	0.500	0.32	3-13
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.305	0.23	0.447	0.28	0.606	0.33	0.606	0.33	3-5
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.048	0.22	0.073	0.26	0.126	0.33	0.126	0.33	3-4



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.263	0.23	0.385	0.27	0.506	0.32	0.506	0.32	3-5
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.251	0.22	0.367	0.27	0.480	0.31	0.480	0.31	3-4
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.108	0.21	0.159	0.25	0.235	0.30	0.235	0.30	3-6
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.101	0.21	0.151	0.25	0.219	0.30	0.219	0.30	3-6
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.254	0.22	0.371	0.26	0.489	0.30	0.489	0.30	3-5
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.052	0.18	0.079	0.22	0.149	0.30	0.149	0.30	3-3
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.098	0.20	0.146	0.25	0.211	0.30	0.211	0.30	3-6
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.100	0.20	0.148	0.24	0.215	0.30	0.215	0.30	3-6
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.107	0.20	0.158	0.24	0.233	0.29	0.233	0.29	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.079	0.20	0.117	0.24	0.172	0.29	0.172	0.29	3-6
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.050	0.18	0.076	0.22	0.130	0.29	0.130	0.29	3-3
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.071	0.21	0.110	0.26	0.135	0.28	0.135	0.28	3-2
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.081	0.19	0.119	0.23	0.182	0.28	0.182	0.28	3-6
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.028	0.20	0.043	0.25	0.053	0.28	0.053	0.28	3-4
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.050	0.17	0.076	0.21	0.129	0.28	0.129	0.28	3-3
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.101	0.19	0.149	0.23	0.221	0.28	0.221	0.28	3-6
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.050	0.17	0.076	0.21	0.128	0.28	0.128	0.28	3-3
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.075	0.20	0.117	0.25	0.143	0.27	0.143	0.27	3-2
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.064	0.17	0.097	0.21	0.170	0.27	0.170	0.27	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.074	0.20	0.115	0.24	0.142	0.27	0.142	0.27	3-2
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.062	0.20	0.096	0.24	0.116	0.27	0.116	0.27	3-4
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.096	0.19	0.145	0.24	0.171	0.27	0.171	0.27	3-4
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.062	0.17	0.092	0.20	0.167	0.26	0.167	0.26	3-3
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.075	0.19	0.117	0.23	0.146	0.26	0.146	0.26	3-2
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.050	0.16	0.076	0.20	0.135	0.26	0.135	0.26	3-3



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Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.062	0.19	0.096	0.24	0.115	0.26	0.115	0.26	3-4
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.027	0.17	0.042	0.21	0.069	0.25	0.069	0.25	3-5
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.028	0.17	0.044	0.22	0.067	0.25	0.067	0.25	3-2
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.198	0.19	0.298	0.24	0.342	0.25	0.342	0.25	3-13
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.025	0.18	0.039	0.22	0.050	0.25	0.050	0.25	3-3
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.021	0.17	0.032	0.21	0.040	0.24	0.040	0.24	3-3
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.050	0.14	0.076	0.17	0.140	0.23	0.140	0.23	3-3
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.045	0.17	0.069	0.21	0.086	0.23	0.086	0.23	3-4
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.073	0.14	0.109	0.17	0.197	0.23	0.197	0.23	3-2
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.195	0.17	0.295	0.21	0.334	0.22	0.334	0.22	3-13
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.137	0.14	0.205	0.17	0.369	0.22	0.369	0.22	3-2
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.062	0.17	0.096	0.20	0.116	0.22	0.116	0.22	3-4
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.064	0.14	0.097	0.17	0.168	0.22	0.168	0.22	3-2
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.194	0.17	0.294	0.21	0.331	0.22	0.331	0.22	3-9
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.096	0.16	0.145	0.20	0.170	0.22	0.170	0.22	3-4
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.045	0.16	0.069	0.19	0.085	0.21	0.085	0.21	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.096	0.16	0.145	0.19	0.169	0.21	0.169	0.21	3-4
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.009	0.09	0.014	0.13	0.026	0.21	0.026	0.21	3-5
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.011	0.13	0.017	0.16	0.031	0.21	0.031	0.21	3-3
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.068	0.13	0.103	0.16	0.181	0.20	0.181	0.20	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.073	0.13	0.109	0.16	0.187	0.20	0.187	0.20	3-2
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.038	0.15	0.059	0.18	0.072	0.20	0.072	0.20	3-3
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.096	0.15	0.145	0.18	0.167	0.20	0.167	0.20	3-4
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.009	0.13	0.014	0.15	0.026	0.20	0.026	0.20	3-3
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.083	0.14	0.127	0.18	0.146	0.19	0.146	0.19	3-4



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.066	0.12	0.099	0.15	0.171	0.19	0.171	0.19	3-2
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.021	0.12	0.032	0.15	0.052	0.19	0.052	0.19	3-15
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.004	0.12	0.006	0.14	0.014	0.19	0.014	0.19	3-3
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.11	0.000	0.14	0.003	0.18	0.003	0.18	3-6
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.036	0.11	0.054	0.13	0.105	0.18	0.105	0.18	3-4
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.021	0.11	0.032	0.14	0.048	0.17	0.048	0.17	3-15
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.054	0.11	0.081	0.13	0.147	0.17	0.147	0.17	3-2
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.019	0.12	0.028	0.15	0.046	0.17	0.046	0.17	3-4
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.036	0.10	0.054	0.12	0.101	0.17	0.101	0.17	3-3
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.054	0.10	0.081	0.12	0.144	0.16	0.144	0.16	3-3
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.047	0.10	0.071	0.13	0.121	0.16	0.121	0.16	3-3
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.024	0.10	0.038	0.13	0.061	0.16	0.061	0.16	3-5
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.051	0.10	0.077	0.12	0.127	0.16	0.127	0.16	3-3
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.049	0.10	0.072	0.13	0.116	0.16	0.116	0.16	3-3
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.021	0.11	0.033	0.14	0.038	0.16	0.038	0.16	3-3
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.051	0.10	0.077	0.12	0.125	0.15	0.125	0.15	3-3
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.054	0.10	0.081	0.12	0.143	0.15	0.143	0.15	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.049	0.10	0.072	0.12	0.110	0.15	0.110	0.15	3-3
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.013	0.10	0.020	0.12	0.033	0.15	0.033	0.15	3-3
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.021	0.11	0.032	0.14	0.036	0.15	0.036	0.15	3-3
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.033	0.09	0.050	0.11	0.095	0.15	0.095	0.15	3-3
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.11	0.008	0.13	0.028	0.14	0.028	0.14	3-9
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.009	0.09	0.014	0.11	0.022	0.14	0.022	0.14	3-5
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.019	0.09	0.030	0.11	0.049	0.14	0.049	0.14	3-5
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.047	0.09	0.071	0.11	0.127	0.14	0.127	0.14	3-3



Table A-2 Model Results for Existing (2015) Flows with the PPSP Contribution

Sewer Main ID ³	Facility ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		CIP ²		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.014	0.10	0.022	0.13	0.025	0.13	0.025	0.13	3-3
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.006	0.05	0.010	0.06	0.028	0.13	0.028	0.10	3-6
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.013	0.08	0.020	0.10	0.032	0.13	0.032	0.13	3-3
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.007	0.08	0.011	0.10	0.019	0.12	0.019	0.12	3-5
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.018	0.09	0.027	0.11	0.034	0.12	0.034	0.12	3-4
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.011	0.08	0.017	0.10	0.024	0.12	0.024	0.12	3-5
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.019	0.08	0.028	0.09	0.041	0.12	0.041	0.12	3-4
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.019	0.08	0.028	0.10	0.037	0.11	0.037	0.11	3-4
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.010	0.07	0.015	0.09	0.025	0.11	0.025	0.11	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.001	0.06	0.002	0.08	0.007	0.11	0.007	0.11	3-5
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.007	0.07	0.011	0.08	0.019	0.10	0.019	0.10	3-5
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.003	0.06	0.005	0.07	0.009	0.09	0.009	0.09	3-5
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.004	0.04	0.006	0.05	0.020	0.09	0.020	0.09	3-6
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.008	0.06	0.013	0.07	0.017	0.08	0.017	0.08	3-5
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.003	0.04	0.005	0.05	0.014	0.08	0.014	0.08	3-6
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.007	0.05	0.011	0.06	0.016	0.07	0.016	0.07	3-3
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.003	0.05	0.005	0.06	0.008	0.07	0.008	0.07	3-5
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	0.014	0.06	3-9
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.001	0.02	0.001	0.03	0.006	0.06	0.006	0.06	3-6
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.01	0.000	0.01	0.000	0.02	0.000	0.02	3-6
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with existing diameter.
2. Pipeline was analyzed with WWMP CIP diameter.
3. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	0.627	0.64	0.872	0.74	1.577	0.99	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	0.628	0.62	0.873	0.71	1.577	0.96	3-11
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	5.994	0.51	8.585	0.62	16.392	0.88	3-10
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	5.992	0.49	8.571	0.60	15.839	0.88	3-10
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.439	0.44	0.659	0.55	1.178	0.85	3-8
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	1.727	0.43	2.653	0.54	3.784	0.82	3-10
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	3.080	0.40	4.334	0.48	10.058	0.81	3-12
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.435	0.41	0.652	0.52	1.164	0.78	3-8
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.439	0.41	0.659	0.52	1.184	0.78	3-8
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	1.672	0.39	2.496	0.51	3.511	0.78	3-10
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	2.798	0.37	3.938	0.44	9.425	0.78	3-11
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	0.627	0.42	0.870	0.50	1.581	0.76	3-11
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	3.080	0.40	4.334	0.48	10.059	0.76	3-12
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.220	0.39	0.323	0.50	0.549	0.75	3-7
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	1.678	0.37	2.525	0.48	3.446	0.75	3-10
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	6.008	0.44	8.560	0.53	15.910	0.75	3-10
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.426	0.40	0.639	0.50	1.126	0.74	3-7
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	3.003	0.37	4.233	0.44	9.878	0.73	3-12
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	2.998	0.37	4.237	0.44	9.879	0.73	3-12
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.434	0.38	0.651	0.48	1.160	0.72	3-8
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	3.075	0.35	4.329	0.42	10.050	0.72	3-12
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	2.802	0.36	3.965	0.43	9.536	0.71	3-11
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.071	0.45	1.614	0.57	2.274	0.71	3-10
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.197	0.41	0.297	0.52	0.469	0.71	3-7
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.066	0.43	1.610	0.55	2.262	0.69	3-10



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.439	0.38	0.659	0.48	1.185	0.68	3-8
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	1.670	0.32	2.484	0.42	3.415	0.67	3-10
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.061	0.41	1.606	0.52	2.249	0.66	3-10
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.414	0.38	0.621	0.47	1.079	0.66	3-7
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.277	0.33	0.417	0.40	2.519	0.66	3-13
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	18.406	0.40	26.374	0.48	48.082	0.66	3-10
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.206	0.37	0.316	0.45	0.572	0.65	3-7
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	2.761	0.31	3.892	0.38	9.343	0.65	3-11
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	2.994	0.34	4.245	0.40	9.877	0.65	3-12
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.280	0.38	0.405	0.47	0.685	0.64	3-1
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	2.958	0.33	4.220	0.39	9.865	0.64	3-11
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	0.620	0.37	0.938	0.47	1.517	0.63	3-9
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	2.868	0.32	4.359	0.39	10.704	0.63	3-11
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	0.606	0.37	0.917	0.47	1.494	0.63	3-9
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	0.606	0.37	0.917	0.46	1.491	0.63	3-9
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	0.606	0.37	0.917	0.46	1.487	0.62	3-9
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	0.592	0.37	0.895	0.46	1.464	0.62	3-9
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	0.592	0.37	0.896	0.46	1.462	0.62	3-9
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	0.592	0.36	0.896	0.46	1.459	0.62	3-9
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.174	0.38	0.289	0.51	0.393	0.61	3-4
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	4.172	0.40	5.283	0.46	8.540	0.61	3-10
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.564	0.36	0.852	0.45	1.413	0.61	3-9
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.564	0.36	0.852	0.45	1.411	0.60	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.564	0.36	0.852	0.45	1.409	0.60	3-9
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.076	0.39	1.616	0.49	2.285	0.60	3-10



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.220	0.32	0.323	0.41	0.549	0.60	3-7
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.060	0.38	1.606	0.48	2.248	0.60	3-10
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	3.019	0.31	4.247	0.37	9.918	0.60	3-12
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	2.995	0.31	4.241	0.37	9.886	0.60	3-12
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	3.013	0.30	4.242	0.36	9.902	0.60	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	3.008	0.30	4.237	0.36	9.889	0.59	3-12
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	1.817	0.28	2.837	0.37	3.522	0.59	3-10
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.536	0.35	0.809	0.44	1.363	0.59	3-9
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.217	0.33	0.325	0.41	0.607	0.59	3-7
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.167	0.38	0.282	0.51	0.354	0.59	3-4
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	0.616	0.44	0.858	0.52	1.545	0.58	3-2
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	3.313	0.38	4.347	0.44	7.593	0.58	3-10
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	0.620	0.35	0.938	0.45	1.521	0.58	3-9
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	0.879	0.37	1.339	0.47	1.924	0.58	3-9
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.467	0.34	0.701	0.42	1.244	0.58	3-8
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	16.079	0.32	22.887	0.40	42.154	0.57	3-10
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.174	0.36	0.289	0.48	0.390	0.57	3-5
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	1.959	0.33	2.908	0.41	5.236	0.57	3-2
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	3.087	0.32	4.342	0.37	10.077	0.57	3-12
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.167	0.37	0.282	0.48	0.357	0.57	3-5
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.055	0.37	1.602	0.46	2.235	0.57	3-10
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.171	0.36	0.286	0.47	0.384	0.56	3-5
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.052	0.37	1.599	0.46	2.227	0.56	3-10
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.167	0.36	0.282	0.48	0.356	0.56	3-4
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.446	0.32	0.669	0.39	1.211	0.55	3-8



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	1.339	0.32	2.103	0.40	3.675	0.55	3-1
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.446	0.31	0.669	0.39	1.201	0.55	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.446	0.31	0.669	0.39	1.198	0.54	3-8
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	0.890	0.35	1.349	0.44	1.954	0.54	3-9
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.446	0.31	0.669	0.39	1.204	0.54	3-8
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	0.622	0.32	0.865	0.38	1.564	0.54	3-2
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	1.861	0.31	2.784	0.39	4.867	0.53	3-1
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	1.837	0.28	2.892	0.36	3.600	0.53	3-10
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	2.063	0.27	2.968	0.32	7.751	0.53	3-11
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.128	0.35	0.218	0.47	0.261	0.53	3-4
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	2.059	0.26	2.964	0.31	7.775	0.53	3-11
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	2.054	0.25	2.959	0.31	7.901	0.53	3-2
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.128	0.35	0.218	0.47	0.262	0.53	3-4
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	2.694	0.27	3.801	0.32	9.161	0.52	3-11
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	0.888	0.34	1.348	0.42	1.949	0.52	3-9
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.280	0.31	0.405	0.38	0.685	0.52	3-1
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	1.864	0.31	2.787	0.38	4.879	0.52	3-1
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	1.815	0.31	2.721	0.38	4.763	0.52	3-1
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	1.336	0.30	2.100	0.38	3.663	0.52	3-1
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	1.880	0.30	2.803	0.37	4.932	0.52	3-2
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	4.397	0.29	6.167	0.35	12.392	0.52	3-10
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	1.819	0.30	2.725	0.38	4.776	0.51	3-1
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	1.876	0.30	2.799	0.37	4.919	0.51	3-2
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	1.868	0.30	2.791	0.37	4.892	0.51	3-1
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	1.872	0.30	2.795	0.37	4.906	0.51	3-2



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	2.056	0.30	3.041	0.36	6.525	0.51	3-2
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	1.976	0.30	2.927	0.37	5.324	0.51	3-2
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	2.045	0.25	2.950	0.30	5.062	0.51	3-2
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	2.052	0.30	3.038	0.37	5.479	0.51	3-2
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.324	0.30	0.462	0.37	0.813	0.50	3-2
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	1.975	0.29	2.926	0.36	5.313	0.50	3-2
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.205	0.29	0.316	0.36	0.566	0.50	3-7
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.167	0.33	0.282	0.44	0.352	0.50	3-4
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.139	0.33	0.234	0.44	0.283	0.49	3-4
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	1.825	0.29	2.642	0.35	5.589	0.49	3-10
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.326	0.30	0.464	0.36	0.822	0.49	3-2
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	1.972	0.29	2.923	0.35	5.302	0.49	3-2
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	2.047	0.29	3.033	0.35	5.462	0.49	3-2
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.220	0.30	0.323	0.36	0.544	0.48	3-7
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.175	0.31	0.291	0.40	0.400	0.48	3-4
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.280	0.29	0.404	0.36	0.682	0.48	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.276	0.29	0.399	0.36	0.660	0.47	3-1
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.220	0.29	0.323	0.35	0.543	0.47	3-7
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.092	0.28	0.143	0.35	0.244	0.47	3-5
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	1.333	0.27	2.097	0.34	3.651	0.46	3-1
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.128	0.31	0.219	0.41	0.259	0.46	3-4
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.137	0.31	0.231	0.41	0.276	0.46	3-4
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.323	0.28	0.460	0.33	0.804	0.45	3-1
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	3.142	0.25	4.413	0.29	10.228	0.45	3-12
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	0.695	0.29	1.034	0.35	1.573	0.45	3-1



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.137	0.30	0.231	0.40	0.279	0.44	3-4
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	1.826	0.26	2.733	0.32	4.786	0.44	3-1
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	0.935	0.26	1.399	0.32	2.446	0.44	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	0.925	0.26	1.384	0.32	2.418	0.44	3-1
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	3.149	0.24	4.420	0.28	10.246	0.43	3-13
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.319	0.27	0.454	0.32	0.766	0.43	3-1
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.089	0.26	0.139	0.32	0.235	0.43	3-4
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	1.857	0.26	2.780	0.32	4.845	0.42	3-1
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.093	0.25	0.144	0.32	0.251	0.42	3-15
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.230	0.27	0.339	0.34	0.520	0.42	3-1
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.129	0.25	0.193	0.30	0.361	0.42	3-6
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.263	0.27	0.382	0.32	0.612	0.42	3-1
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.223	0.27	0.331	0.33	0.504	0.42	3-1
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.321	0.26	0.457	0.31	0.797	0.41	3-1
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	3.590	0.23	5.036	0.27	11.040	0.41	3-13
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	3.991	0.24	5.611	0.28	11.782	0.41	3-13
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	4.157	0.24	5.859	0.28	12.023	0.41	3-13
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.234	0.26	0.345	0.32	0.531	0.41	3-1
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	3.981	0.23	5.601	0.27	11.873	0.41	3-13
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.067	0.24	0.099	0.29	0.193	0.40	3-6
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.158	0.26	0.226	0.31	0.380	0.40	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.160	0.26	0.228	0.31	0.384	0.40	3-1
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.253	0.26	0.370	0.31	0.588	0.40	3-1
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	3.214	0.22	4.504	0.26	10.370	0.40	3-13
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	4.168	0.23	5.870	0.28	12.051	0.40	3-14



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.194	0.25	0.299	0.30	0.543	0.39	3-7
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	3.422	0.22	4.799	0.26	10.736	0.39	3-13
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.205	0.25	0.316	0.30	0.559	0.39	3-7
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	3.335	0.21	4.667	0.25	10.592	0.39	3-13
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	0.472	0.25	0.703	0.31	1.075	0.38	3-1
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.263	0.24	0.383	0.29	0.619	0.38	3-1
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.004	0.21	0.008	0.29	0.028	0.38	3-5
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	3.237	0.21	4.534	0.25	10.416	0.38	3-13
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.063	0.23	0.095	0.28	0.164	0.38	3-6
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	3.094	0.21	4.349	0.25	10.095	0.38	3-12
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.194	0.24	0.292	0.30	0.452	0.38	3-7
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.197	0.24	0.299	0.29	0.489	0.38	3-7
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.093	0.22	0.144	0.28	0.254	0.37	3-15
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.197	0.24	0.297	0.30	0.464	0.37	3-7
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.075	0.21	0.109	0.26	0.291	0.37	3-2
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.056	0.23	0.090	0.29	0.130	0.37	3-4
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.143	0.23	0.215	0.28	0.378	0.37	3-7
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.068	0.21	0.103	0.26	0.210	0.37	3-6
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.197	0.23	0.297	0.29	0.465	0.36	3-7
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.194	0.23	0.292	0.29	0.455	0.36	3-7
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.096	0.22	0.149	0.27	0.261	0.36	3-15
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	3.093	0.21	4.348	0.24	10.092	0.36	3-12
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.198	0.21	0.295	0.25	0.576	0.36	3-6
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.194	0.21	0.299	0.26	0.539	0.35	3-7
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.195	0.22	0.296	0.27	0.474	0.35	3-7



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.197	0.21	0.299	0.26	0.491	0.34	3-7
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.187	0.21	0.287	0.26	0.447	0.33	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.191	0.21	0.291	0.26	0.454	0.33	3-5
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.098	0.19	0.151	0.24	0.268	0.32	3-6
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.193	0.20	0.294	0.24	0.467	0.30	3-6
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.274	0.15	0.414	0.19	0.502	0.30	3-13
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.143	0.19	0.215	0.23	0.373	0.30	3-7
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.033	0.17	0.050	0.21	0.105	0.29	3-4
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.048	0.18	0.076	0.22	0.129	0.29	3-3
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.049	0.17	0.076	0.21	0.145	0.29	3-3
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.191	0.18	0.291	0.23	0.458	0.29	3-5
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.143	0.18	0.215	0.21	0.372	0.28	3-7
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.048	0.17	0.076	0.21	0.128	0.28	3-3
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.048	0.17	0.076	0.21	0.127	0.27	3-3
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.152	0.18	0.246	0.22	0.368	0.27	3-5
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.063	0.16	0.094	0.19	0.178	0.26	3-6
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.147	0.17	0.240	0.21	0.352	0.26	3-4
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.048	0.16	0.075	0.20	0.133	0.26	3-3
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.052	0.15	0.078	0.19	0.160	0.26	3-6
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.066	0.15	0.099	0.19	0.191	0.26	3-6
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.149	0.17	0.242	0.21	0.359	0.26	3-5
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.062	0.15	0.093	0.19	0.176	0.25	3-6
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.053	0.15	0.082	0.19	0.155	0.25	3-3
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.055	0.15	0.085	0.19	0.157	0.25	3-6
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.064	0.15	0.096	0.18	0.184	0.25	3-6



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.022	0.17	0.038	0.23	0.047	0.25	3-4
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.064	0.15	0.097	0.18	0.180	0.25	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.043	0.15	0.067	0.18	0.126	0.25	3-6
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.198	0.19	0.298	0.24	0.343	0.25	3-13
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.050	0.14	0.075	0.17	0.152	0.25	3-6
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.047	0.14	0.071	0.17	0.143	0.24	3-6
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.033	0.13	0.049	0.15	0.128	0.24	3-2
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.056	0.14	0.086	0.17	0.163	0.24	3-6
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.034	0.16	0.052	0.19	0.077	0.24	3-5
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.045	0.14	0.069	0.17	0.136	0.24	3-6
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.064	0.14	0.097	0.17	0.180	0.23	3-6
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.048	0.13	0.075	0.17	0.139	0.23	3-3
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.195	0.17	0.295	0.21	0.334	0.22	3-13
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.194	0.17	0.294	0.21	0.332	0.22	3-9
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.007	0.13	0.010	0.17	0.037	0.21	3-4
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.028	0.13	0.041	0.16	0.074	0.21	3-4
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.042	0.11	0.061	0.13	0.158	0.20	3-2
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.075	0.10	0.109	0.12	0.289	0.20	3-2
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.033	0.10	0.049	0.12	0.127	0.20	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.042	0.10	0.061	0.12	0.148	0.18	3-2
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.038	0.10	0.055	0.12	0.142	0.18	3-2
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.006	0.10	0.009	0.12	0.025	0.18	3-3
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.005	0.10	0.008	0.12	0.020	0.18	3-3
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.032	0.12	0.050	0.15	0.070	0.17	3-5
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.003	0.10	0.004	0.12	0.013	0.17	3-3



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.036	0.09	0.052	0.11	0.133	0.17	3-2
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.029	0.09	0.044	0.11	0.096	0.17	3-4
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.008	0.07	0.013	0.09	0.047	0.16	3-2
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.007	0.07	0.010	0.08	0.042	0.16	3-2
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.003	0.07	0.005	0.09	0.019	0.16	3-3
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.029	0.09	0.044	0.11	0.092	0.16	3-3
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.003	0.05	0.005	0.08	0.018	0.16	3-5
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.005	0.06	0.008	0.08	0.036	0.16	3-2
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.008	0.06	0.013	0.08	0.051	0.15	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.008	0.07	0.012	0.08	0.046	0.15	3-2
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.029	0.11	0.044	0.13	0.061	0.15	3-5
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.003	0.07	0.005	0.08	0.015	0.15	3-3
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.08	0.000	0.10	0.003	0.15	3-6
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.007	0.07	0.010	0.08	0.036	0.15	3-4
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.022	0.11	0.034	0.13	0.041	0.15	3-5
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.029	0.08	0.043	0.09	0.114	0.15	3-2
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.029	0.08	0.043	0.10	0.097	0.15	3-3
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.029	0.08	0.043	0.09	0.110	0.14	3-3
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.11	0.008	0.13	0.028	0.14	3-9
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.028	0.09	0.041	0.11	0.072	0.14	3-4
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.029	0.08	0.042	0.09	0.098	0.14	3-3
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.003	0.05	0.004	0.06	0.029	0.14	3-15
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.028	0.08	0.040	0.09	0.089	0.14	3-3
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.029	0.08	0.042	0.09	0.097	0.14	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.028	0.09	0.041	0.11	0.070	0.14	3-4



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.029	0.07	0.043	0.09	0.110	0.14	3-3
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.006	0.06	0.010	0.07	0.033	0.14	3-4
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.027	0.08	0.041	0.09	0.086	0.13	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.028	0.08	0.040	0.09	0.083	0.13	3-3
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.006	0.06	0.010	0.08	0.032	0.13	3-3
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.007	0.06	0.010	0.07	0.037	0.13	3-4
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.010	0.08	0.015	0.10	0.021	0.13	3-3
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.003	0.04	0.004	0.05	0.025	0.13	3-15
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.028	0.08	0.042	0.10	0.067	0.13	3-4
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.029	0.07	0.043	0.08	0.103	0.13	3-3
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.014	0.08	0.024	0.10	0.040	0.12	3-4
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.006	0.06	0.009	0.07	0.026	0.12	3-3
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.006	0.08	0.009	0.10	0.016	0.12	3-5
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.021	0.08	0.033	0.09	0.054	0.12	3-4
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.007	0.05	0.012	0.07	0.036	0.12	3-6
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.003	0.05	0.005	0.07	0.014	0.12	3-5
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.014	0.08	0.024	0.10	0.030	0.11	3-4
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.008	0.06	0.012	0.08	0.023	0.11	3-7
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.002	0.04	0.003	0.05	0.018	0.11	3-3
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.014	0.07	0.024	0.09	0.036	0.11	3-4
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.003	0.07	0.004	0.08	0.012	0.10	3-5
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.014	0.07	0.024	0.09	0.032	0.10	3-4
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.008	0.07	0.012	0.08	0.020	0.10	3-7
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.006	0.05	0.009	0.06	0.028	0.10	3-6
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.007	0.07	0.011	0.09	0.014	0.10	3-3



Table A-3 Model Results for 2025 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.008	0.07	0.012	0.08	0.018	0.10	3-7
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.008	0.05	0.013	0.06	0.033	0.10	3-7
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.002	0.03	0.003	0.04	0.017	0.09	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.000	0.03	0.000	0.03	0.005	0.09	3-5
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.004	0.04	0.006	0.05	0.021	0.09	3-6
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.003	0.04	0.005	0.06	0.010	0.09	3-3
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.006	0.06	0.009	0.07	0.012	0.08	3-7
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.002	0.03	0.003	0.04	0.014	0.08	3-3
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.003	0.04	0.004	0.04	0.014	0.08	3-6
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.000	0.03	0.000	0.04	0.005	0.07	3-7
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.001	0.03	0.001	0.04	0.005	0.07	3-5
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.003	0.04	0.004	0.05	0.010	0.07	3-3
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.005	0.04	0.007	0.05	0.012	0.07	3-5
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	3-9
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.000	0.02	0.000	0.03	0.005	0.06	3-6
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.001	0.03	0.002	0.04	0.005	0.06	3-5
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.000	0.01	0.000	0.01	0.001	0.03	3-7
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.00	0.000	0.01	0.000	0.02	3-6
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.000	0.01	0.000	0.01	0.000	0.01	3-7
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.832	0.64	1.241	0.91	1.685	1.00	3-8
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.828	0.60	1.235	0.84	1.672	1.00	3-8
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.412	0.59	0.597	0.81	0.657	1.00	3-7
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.817	0.58	1.218	0.79	1.635	1.00	3-7
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.317	0.58	0.473	0.71	0.635	1.00	3-7
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.827	0.56	1.233	0.76	1.668	1.00	3-8
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.805	0.54	1.201	0.72	1.595	1.00	3-7
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.405	0.53	0.621	0.70	1.052	1.00	3-7
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.412	0.48	0.598	0.64	0.648	1.00	3-7
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.404	0.41	0.620	0.53	1.045	1.00	3-7
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.412	0.41	0.597	0.51	0.648	1.00	3-7
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.411	0.40	0.597	0.50	0.665	1.00	3-7
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.394	0.34	0.604	0.41	1.024	1.00	3-7
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.404	0.33	0.620	0.41	1.041	1.00	3-7
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.394	0.30	0.604	0.37	1.022	1.00	3-7
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.317	0.30	0.473	0.37	0.623	1.00	3-7
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.832	0.60	1.241	0.81	1.689	0.98	3-8
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	0.631	0.65	0.877	0.75	1.543	0.98	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	0.631	0.63	0.877	0.72	1.544	0.95	3-11
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.832	0.55	1.241	0.70	1.686	0.91	3-8
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	6.610	0.52	9.547	0.64	16.001	0.88	3-10
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	6.608	0.50	9.486	0.62	15.858	0.86	3-10
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.466	0.54	2.183	0.69	2.773	0.84	3-10
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.461	0.52	2.181	0.67	2.761	0.83	3-10
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	2.126	0.44	3.229	0.56	4.410	0.81	3-10



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.456	0.49	2.178	0.65	2.749	0.80	3-10
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	3.299	0.42	4.622	0.50	9.794	0.79	3-12
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	1.014	0.49	1.516	0.63	2.019	0.79	3-9
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	1.000	0.49	1.496	0.63	1.996	0.79	3-9
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	1.000	0.49	1.497	0.63	1.993	0.78	3-9
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	1.000	0.49	1.498	0.63	1.989	0.78	3-9
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	0.986	0.49	1.477	0.62	1.966	0.78	3-9
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	0.986	0.49	1.478	0.62	1.963	0.77	3-9
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	2.071	0.41	3.040	0.53	4.107	0.77	3-10
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	0.986	0.48	1.478	0.62	1.960	0.77	3-9
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.958	0.48	1.435	0.61	1.914	0.76	3-9
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	2.980	0.38	4.166	0.46	9.135	0.76	3-11
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.958	0.48	1.435	0.61	1.912	0.75	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.958	0.48	1.436	0.61	1.910	0.75	3-9
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	6.626	0.45	9.430	0.55	16.084	0.75	3-10
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	2.085	0.39	3.080	0.51	4.053	0.75	3-10
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	3.299	0.42	4.621	0.50	9.794	0.74	3-12
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	0.631	0.43	0.875	0.51	1.557	0.74	3-11
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.930	0.47	1.392	0.60	1.865	0.74	3-9
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.312	0.30	0.465	0.37	0.613	0.73	3-7
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.860	0.46	1.284	0.59	1.742	0.72	3-8
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	3.223	0.38	4.521	0.46	9.619	0.72	3-12
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	3.220	0.38	4.527	0.46	9.639	0.72	3-12
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.484	0.49	0.726	0.65	0.970	0.71	3-7
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.455	0.45	2.179	0.59	2.748	0.71	3-10



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	3.294	0.36	4.617	0.43	9.786	0.70	3-12
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	2.988	0.37	4.198	0.45	9.237	0.70	3-11
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	1.014	0.45	1.514	0.58	2.024	0.70	3-9
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.254	0.47	0.369	0.59	0.473	0.70	3-4
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.839	0.44	1.252	0.56	1.707	0.69	3-8
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.839	0.44	1.252	0.56	1.700	0.69	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.839	0.44	1.252	0.56	1.698	0.69	3-8
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.471	0.47	2.183	0.59	2.785	0.68	3-10
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.839	0.44	1.252	0.55	1.703	0.68	3-8
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	2.076	0.34	3.040	0.45	4.001	0.67	3-10
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	1.273	0.45	1.915	0.57	2.426	0.67	3-9
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	19.015	0.40	27.187	0.49	47.843	0.66	3-10
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.230	0.45	0.343	0.57	0.408	0.65	3-4
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.254	0.44	0.370	0.55	0.471	0.65	3-5
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.450	0.44	2.176	0.56	2.735	0.65	3-10
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.277	0.34	0.417	0.40	2.396	0.65	3-13
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	3.221	0.35	4.538	0.42	9.635	0.64	3-12
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.447	0.43	2.173	0.55	2.727	0.64	3-10
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.284	0.39	0.411	0.47	0.687	0.64	3-1
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	2.943	0.33	4.120	0.39	9.051	0.64	3-11
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.244	0.43	0.357	0.54	0.453	0.63	3-5
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	3.195	0.34	4.523	0.41	9.605	0.63	3-11
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.230	0.44	0.343	0.55	0.412	0.63	3-5
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	1.284	0.42	1.922	0.53	2.456	0.62	3-9
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	3.135	0.34	4.733	0.40	10.381	0.62	3-11



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.230	0.43	0.343	0.54	0.411	0.62	3-4
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	1.282	0.41	1.923	0.52	2.451	0.60	3-9
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	4.324	0.41	5.462	0.47	8.422	0.60	3-10
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	2.289	0.31	3.370	0.41	4.256	0.60	3-10
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.189	0.44	0.277	0.55	0.316	0.59	3-4
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.189	0.44	0.277	0.54	0.318	0.59	3-4
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	3.220	0.32	4.533	0.38	9.704	0.59	3-12
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	3.238	0.32	4.534	0.38	9.659	0.59	3-12
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	3.232	0.32	4.529	0.38	9.643	0.59	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	3.228	0.32	4.524	0.38	9.631	0.58	3-12
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	0.620	0.44	0.863	0.53	1.521	0.58	3-2
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	3.448	0.39	4.513	0.45	7.463	0.58	3-10
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	2.044	0.35	3.016	0.42	5.215	0.57	3-2
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	16.684	0.32	23.718	0.41	42.235	0.57	3-10
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.169	0.38	0.248	0.47	0.342	0.57	3-5
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	3.306	0.33	4.630	0.38	9.812	0.56	3-12
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.256	0.38	0.372	0.47	0.482	0.55	3-4
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.010	0.05	0.015	0.07	0.034	0.55	3-7
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.230	0.39	0.343	0.49	0.407	0.54	3-4
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.199	0.40	0.291	0.49	0.339	0.54	3-4
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	2.302	0.31	3.519	0.39	4.102	0.54	3-10
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	1.341	0.32	2.106	0.40	3.563	0.54	3-1
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	0.626	0.32	0.870	0.38	1.539	0.53	3-2
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	1.881	0.32	2.810	0.39	4.767	0.53	3-1
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.284	0.31	0.411	0.38	0.686	0.52	3-1



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	2.205	0.27	3.140	0.33	7.428	0.52	3-11
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.176	0.35	0.260	0.43	0.357	0.52	3-15
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	1.884	0.31	2.813	0.38	4.779	0.52	3-1
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.189	0.38	0.277	0.48	0.314	0.52	3-4
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	1.900	0.31	2.829	0.38	4.831	0.51	3-2
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	1.829	0.31	2.740	0.38	4.659	0.51	3-1
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	2.839	0.28	3.980	0.33	8.815	0.51	3-11
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	2.201	0.27	3.136	0.32	7.417	0.51	3-11
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	2.128	0.31	3.122	0.38	5.394	0.51	3-2
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	4.621	0.30	6.450	0.36	12.124	0.51	3-10
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	1.338	0.30	2.103	0.38	3.551	0.51	3-1
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	2.204	0.31	3.233	0.38	5.541	0.51	3-2
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	1.833	0.31	2.743	0.38	4.672	0.51	3-1
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	2.196	0.26	3.131	0.32	7.404	0.51	3-2
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.228	0.34	0.335	0.42	0.483	0.51	3-6
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.145	0.34	0.212	0.42	0.303	0.51	3-4
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.197	0.38	0.289	0.47	0.331	0.50	3-4
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	2.127	0.30	3.121	0.37	5.381	0.50	3-2
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	1.896	0.30	2.825	0.37	4.818	0.50	3-2
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.328	0.31	0.467	0.37	0.811	0.50	3-2
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	1.888	0.30	2.817	0.37	4.792	0.50	3-1
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	1.892	0.30	2.821	0.37	4.805	0.50	3-2
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	2.208	0.31	3.236	0.38	5.554	0.50	3-2
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.223	0.34	0.340	0.42	0.430	0.50	3-6
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.197	0.37	0.289	0.45	0.335	0.49	3-4



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	2.124	0.30	3.118	0.36	5.371	0.49	3-2
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.330	0.30	0.470	0.36	0.820	0.49	3-2
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	2.199	0.30	3.228	0.36	5.524	0.49	3-2
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	1.927	0.30	2.774	0.35	5.459	0.49	3-10
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	2.187	0.25	3.122	0.31	5.075	0.48	3-2
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.284	0.30	0.411	0.36	0.682	0.48	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.280	0.30	0.406	0.36	0.661	0.47	3-1
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.114	0.30	0.169	0.37	0.249	0.46	3-6
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.452	0.31	0.675	0.39	0.915	0.46	3-6
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	1.335	0.27	2.100	0.34	3.539	0.46	3-1
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.176	0.31	0.259	0.38	0.359	0.45	3-15
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.327	0.28	0.466	0.33	0.802	0.45	3-1
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	0.713	0.29	1.062	0.36	1.585	0.45	3-1
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.012	0.26	0.022	0.35	0.038	0.44	3-5
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.340	0.31	0.501	0.38	0.666	0.44	3-7
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	3.362	0.25	4.701	0.30	9.962	0.44	3-12
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.304	0.29	0.453	0.36	0.599	0.44	3-7
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.301	0.30	0.448	0.38	0.592	0.44	3-7
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.179	0.30	0.264	0.36	0.367	0.44	3-15
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.107	0.29	0.158	0.36	0.218	0.44	3-6
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	1.846	0.26	2.760	0.33	4.690	0.43	3-1
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	0.945	0.26	1.413	0.32	2.395	0.43	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	0.935	0.26	1.397	0.32	2.369	0.43	3-1
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.323	0.27	0.461	0.33	0.763	0.43	3-1
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.096	0.30	0.139	0.36	0.176	0.43	3-4



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	3.369	0.25	4.708	0.29	9.980	0.43	3-13
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.245	0.29	0.360	0.36	0.503	0.43	3-7
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.235	0.28	0.348	0.34	0.523	0.42	3-1
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	1.877	0.26	2.807	0.32	4.745	0.42	3-1
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.267	0.27	0.389	0.33	0.614	0.42	3-1
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.229	0.27	0.340	0.34	0.508	0.42	3-1
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.325	0.26	0.463	0.31	0.794	0.41	3-1
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.328	0.29	0.483	0.35	0.639	0.41	3-7
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.239	0.27	0.353	0.33	0.535	0.41	3-1
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	3.810	0.24	5.324	0.28	10.772	0.40	3-13
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	4.212	0.24	5.892	0.29	11.511	0.40	3-13
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	4.378	0.24	6.140	0.29	11.755	0.40	3-13
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.258	0.26	0.377	0.32	0.591	0.40	3-1
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.160	0.26	0.229	0.31	0.379	0.40	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.162	0.26	0.231	0.31	0.383	0.40	3-1
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	4.202	0.24	5.882	0.28	11.595	0.40	3-13
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.340	0.28	0.500	0.34	0.668	0.40	3-7
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	3.434	0.23	4.792	0.27	10.105	0.40	3-13
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	4.389	0.24	6.151	0.28	11.782	0.39	3-14
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	0.484	0.25	0.722	0.31	1.083	0.39	3-1
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.181	0.27	0.267	0.32	0.372	0.39	3-6
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	3.642	0.22	5.087	0.27	10.469	0.39	3-13
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.268	0.25	0.390	0.30	0.621	0.38	3-1
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.301	0.27	0.441	0.33	0.586	0.38	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.310	0.27	0.455	0.33	0.602	0.38	3-5



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	3.555	0.22	4.955	0.26	10.325	0.38	3-13
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.140	0.23	0.210	0.28	0.371	0.38	3-2
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	3.457	0.22	4.822	0.25	10.150	0.37	3-13
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	3.313	0.22	4.636	0.25	9.830	0.37	3-12
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.326	0.25	0.480	0.31	0.634	0.36	3-6
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	3.312	0.22	4.635	0.25	9.828	0.36	3-12
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.243	0.24	0.358	0.30	0.496	0.35	3-7
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.310	0.24	0.454	0.29	0.606	0.33	3-5
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.050	0.22	0.074	0.27	0.126	0.33	3-4
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.122	0.23	0.184	0.28	0.254	0.33	3-6
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.243	0.23	0.358	0.28	0.495	0.33	3-7
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.142	0.22	0.214	0.27	0.287	0.32	3-6
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.268	0.23	0.393	0.28	0.506	0.32	3-5
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.256	0.22	0.375	0.27	0.480	0.31	3-4
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.110	0.21	0.162	0.25	0.235	0.30	3-6
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.102	0.21	0.152	0.25	0.219	0.30	3-6
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.259	0.22	0.379	0.27	0.489	0.30	3-5
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.055	0.19	0.083	0.23	0.149	0.30	3-3
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.274	0.15	0.414	0.19	0.502	0.30	3-13
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.099	0.20	0.147	0.25	0.211	0.30	3-6
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.113	0.20	0.167	0.24	0.248	0.30	3-6
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.102	0.20	0.150	0.25	0.215	0.30	3-6
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.109	0.20	0.161	0.24	0.233	0.29	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.081	0.20	0.119	0.24	0.172	0.29	3-6
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.142	0.20	0.214	0.25	0.288	0.29	3-6



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.052	0.18	0.080	0.23	0.130	0.29	3-3
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.111	0.20	0.164	0.24	0.242	0.29	3-6
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.071	0.21	0.111	0.26	0.135	0.28	3-2
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.082	0.19	0.121	0.23	0.182	0.28	3-6
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.029	0.21	0.044	0.26	0.053	0.28	3-4
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.052	0.18	0.080	0.22	0.129	0.28	3-3
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.103	0.19	0.152	0.23	0.221	0.28	3-6
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.052	0.18	0.080	0.22	0.128	0.28	3-3
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.075	0.20	0.116	0.25	0.143	0.27	3-2
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.065	0.17	0.098	0.21	0.170	0.27	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.074	0.20	0.115	0.24	0.142	0.27	3-2
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.061	0.20	0.095	0.24	0.116	0.27	3-4
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.095	0.20	0.145	0.24	0.171	0.27	3-4
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.065	0.17	0.096	0.20	0.167	0.26	3-3
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.075	0.19	0.116	0.23	0.146	0.26	3-2
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.052	0.16	0.080	0.20	0.135	0.26	3-3
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.061	0.19	0.095	0.24	0.115	0.26	3-4
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.027	0.17	0.042	0.21	0.069	0.25	3-5
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.198	0.19	0.298	0.24	0.342	0.25	3-13
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.028	0.18	0.044	0.22	0.067	0.25	3-2
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.025	0.18	0.039	0.22	0.050	0.25	3-3
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.021	0.17	0.032	0.21	0.040	0.24	3-3
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.052	0.14	0.079	0.17	0.140	0.23	3-3
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.045	0.17	0.069	0.21	0.086	0.23	3-4
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.075	0.14	0.112	0.17	0.197	0.23	3-2



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.195	0.17	0.295	0.21	0.334	0.22	3-13
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.140	0.14	0.210	0.17	0.369	0.22	3-2
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.061	0.17	0.095	0.20	0.116	0.22	3-4
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.065	0.14	0.098	0.17	0.168	0.22	3-2
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.194	0.17	0.294	0.21	0.331	0.22	3-9
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.095	0.16	0.145	0.20	0.170	0.22	3-4
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.045	0.16	0.069	0.19	0.085	0.21	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.095	0.16	0.145	0.19	0.169	0.21	3-4
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.009	0.09	0.014	0.14	0.026	0.21	3-5
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.011	0.13	0.017	0.16	0.031	0.21	3-3
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.070	0.13	0.106	0.16	0.181	0.20	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.075	0.13	0.112	0.16	0.187	0.20	3-2
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.038	0.14	0.058	0.18	0.072	0.20	3-3
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.095	0.15	0.145	0.18	0.167	0.20	3-4
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.009	0.13	0.014	0.15	0.026	0.20	3-3
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.084	0.14	0.127	0.18	0.146	0.19	3-4
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.068	0.12	0.102	0.15	0.171	0.19	3-2
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.021	0.12	0.033	0.15	0.052	0.19	3-15
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.004	0.12	0.006	0.14	0.014	0.19	3-3
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.11	0.000	0.14	0.003	0.18	3-6
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.038	0.11	0.056	0.13	0.105	0.18	3-4
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.021	0.11	0.033	0.14	0.048	0.17	3-15
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.056	0.11	0.083	0.13	0.147	0.17	3-2
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.019	0.12	0.029	0.15	0.046	0.17	3-4
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.038	0.10	0.056	0.12	0.101	0.17	3-3



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.056	0.10	0.083	0.13	0.144	0.16	3-3
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.049	0.11	0.073	0.13	0.121	0.16	3-3
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.024	0.10	0.038	0.13	0.061	0.16	3-5
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.053	0.10	0.079	0.13	0.127	0.16	3-3
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.050	0.10	0.073	0.13	0.116	0.16	3-3
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.021	0.11	0.033	0.14	0.038	0.16	3-3
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.053	0.10	0.079	0.12	0.125	0.15	3-3
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.056	0.10	0.083	0.12	0.143	0.15	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.050	0.10	0.073	0.12	0.110	0.15	3-3
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.013	0.10	0.021	0.12	0.033	0.15	3-3
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.021	0.11	0.033	0.14	0.036	0.15	3-3
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.035	0.09	0.052	0.11	0.095	0.15	3-3
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.11	0.008	0.13	0.028	0.14	3-9
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.009	0.09	0.014	0.11	0.022	0.14	3-5
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.019	0.09	0.029	0.11	0.049	0.14	3-5
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.049	0.09	0.073	0.11	0.127	0.14	3-3
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.014	0.10	0.022	0.13	0.025	0.13	3-3
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.013	0.08	0.021	0.10	0.032	0.13	3-3
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.007	0.08	0.011	0.10	0.019	0.12	3-5
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.018	0.09	0.028	0.11	0.034	0.12	3-4
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.010	0.08	0.016	0.09	0.024	0.12	3-5
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.019	0.08	0.029	0.10	0.041	0.12	3-4
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.009	0.06	0.014	0.07	0.036	0.12	3-6
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.009	0.07	0.014	0.08	0.024	0.11	3-7
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.019	0.08	0.029	0.10	0.037	0.11	3-4



Table A-4 Model Results for (2025) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.010	0.07	0.016	0.09	0.025	0.11	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.001	0.06	0.002	0.08	0.007	0.11	3-5
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.009	0.07	0.014	0.09	0.021	0.10	3-7
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.007	0.05	0.011	0.07	0.028	0.10	3-6
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.007	0.07	0.011	0.08	0.019	0.10	3-5
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.009	0.07	0.014	0.09	0.018	0.10	3-7
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.003	0.06	0.005	0.07	0.009	0.09	3-5
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.005	0.04	0.007	0.05	0.020	0.09	3-6
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.006	0.06	0.009	0.07	0.011	0.08	3-7
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.008	0.05	0.012	0.07	0.017	0.08	3-5
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.004	0.04	0.006	0.05	0.014	0.08	3-6
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.008	0.05	0.012	0.06	0.016	0.07	3-3
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.001	0.04	0.001	0.05	0.006	0.07	3-7
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.003	0.04	0.004	0.06	0.008	0.07	3-5
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	3-9
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.001	0.03	0.001	0.03	0.006	0.06	3-6
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.001	0.02	0.001	0.02	0.002	0.03	3-7
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.01	0.000	0.01	0.000	0.02	3-6
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.001	0.02	0.001	0.02	0.001	0.02	3-7
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	0.763	0.68	1.146	0.86	1.857	1.00	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	0.764	0.66	1.147	0.83	1.858	1.00	3-11
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	3.544	0.43	6.027	0.58	11.912	0.93	3-12
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	3.248	0.40	5.620	0.54	11.087	0.93	3-11
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	7.193	0.54	11.106	0.67	18.630	0.91	3-10
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	7.192	0.52	11.105	0.66	18.479	0.90	3-10
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.463	0.45	0.695	0.57	1.216	0.88	3-8
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.399	0.46	0.585	0.58	1.060	0.86	3-1
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	3.465	0.40	5.939	0.53	11.656	0.86	3-12
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	2.002	0.47	3.004	0.60	4.140	0.85	3-10
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	3.539	0.37	6.024	0.51	11.902	0.84	3-12
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	3.544	0.43	6.027	0.57	11.914	0.84	3-12
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	3.465	0.40	5.927	0.53	11.672	0.83	3-12
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.458	0.42	0.688	0.54	1.202	0.81	3-8
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	1.945	0.43	2.911	0.56	3.909	0.81	3-10
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.399	0.38	0.585	0.47	1.059	0.81	3-1
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	3.262	0.39	5.665	0.52	11.244	0.81	3-11
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	0.763	0.46	1.149	0.60	1.855	0.80	3-11
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.463	0.42	0.695	0.54	1.222	0.80	3-8
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	1.957	0.41	2.958	0.54	3.878	0.79	3-10
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	3.210	0.34	5.593	0.46	10.955	0.78	3-11
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.231	0.40	0.339	0.52	0.567	0.78	3-7
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	7.208	0.47	11.125	0.58	18.842	0.78	3-10
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.249	0.49	1.890	0.63	2.546	0.77	3-10
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.449	0.41	0.674	0.52	1.165	0.76	3-7



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.244	0.47	1.886	0.61	2.534	0.76	3-10
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	3.469	0.36	5.965	0.49	11.659	0.75	3-12
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.458	0.39	0.687	0.50	1.198	0.74	3-8
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.377	0.37	0.572	0.47	3.447	0.73	3-13
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.239	0.45	1.882	0.58	2.522	0.73	3-10
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	3.452	0.35	5.960	0.47	11.619	0.73	3-11
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	3.466	0.33	5.951	0.45	11.664	0.71	3-12
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.208	0.43	0.314	0.53	0.486	0.71	3-7
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	1.947	0.35	2.909	0.47	3.859	0.71	3-10
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	3.442	0.35	6.384	0.47	12.549	0.70	3-11
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.463	0.40	0.695	0.49	1.224	0.70	3-8
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.437	0.39	0.656	0.48	1.115	0.68	3-7
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	0.717	0.40	1.087	0.51	1.665	0.67	3-9
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.217	0.38	0.335	0.47	0.593	0.67	3-7
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	20.032	0.41	29.391	0.51	50.260	0.67	3-10
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	3.481	0.33	5.938	0.44	11.724	0.67	3-12
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	0.694	0.40	1.052	0.51	1.628	0.67	3-9
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	3.475	0.33	5.933	0.44	11.703	0.67	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	3.470	0.33	5.929	0.44	11.686	0.67	3-12
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	0.694	0.40	1.052	0.50	1.625	0.66	3-9
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	0.694	0.40	1.052	0.50	1.621	0.66	3-9
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	4.776	0.43	6.611	0.52	9.545	0.66	3-10
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	0.671	0.39	1.016	0.50	1.584	0.66	3-9
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.238	0.41	1.882	0.53	2.520	0.65	3-10
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	0.671	0.39	1.016	0.49	1.582	0.65	3-9



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	0.671	0.39	1.016	0.49	1.579	0.65	3-9
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.254	0.43	1.892	0.54	2.557	0.65	3-10
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.446	0.36	0.656	0.44	1.191	0.64	3-2
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.634	0.38	0.959	0.48	1.519	0.64	3-9
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.184	0.40	0.306	0.52	0.413	0.63	3-4
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.634	0.38	0.959	0.48	1.517	0.63	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.634	0.38	0.959	0.48	1.515	0.63	3-9
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	2.283	0.36	3.446	0.45	6.162	0.63	3-2
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	2.169	0.31	3.401	0.42	4.015	0.63	3-10
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	3.879	0.41	5.650	0.50	8.756	0.63	3-10
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	1.056	0.36	1.566	0.44	2.747	0.63	3-1
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	3.551	0.34	6.035	0.44	11.936	0.63	3-12
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.398	0.35	0.584	0.43	1.055	0.62	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.394	0.35	0.577	0.44	1.032	0.62	3-1
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.597	0.37	0.902	0.47	1.455	0.62	3-9
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	0.717	0.38	1.087	0.49	1.670	0.62	3-9
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.231	0.33	0.340	0.43	0.566	0.62	3-7
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	1.021	0.40	1.559	0.51	2.142	0.62	3-9
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.448	0.35	0.659	0.43	1.201	0.61	3-2
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.233	0.40	1.878	0.51	2.507	0.61	3-10
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.177	0.39	0.299	0.52	0.373	0.61	3-4
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.228	0.34	0.342	0.43	0.627	0.61	3-7
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.230	0.40	1.875	0.50	2.499	0.60	3-10
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.500	0.35	0.751	0.44	1.295	0.60	3-8
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	0.758	0.36	1.207	0.45	1.838	0.60	3-2



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	2.182	0.34	3.317	0.43	5.789	0.59	3-1
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.184	0.37	0.307	0.49	0.411	0.59	3-5
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	17.886	0.34	25.858	0.43	44.951	0.59	3-10
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.177	0.38	0.299	0.50	0.377	0.59	3-5
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	0.752	0.49	1.345	0.58	1.819	0.58	3-2
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	2.373	0.29	4.387	0.39	8.846	0.58	3-11
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	1.412	0.33	2.221	0.42	3.787	0.58	3-1
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.182	0.37	0.304	0.49	0.404	0.58	3-5
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	2.185	0.33	3.320	0.42	5.801	0.58	3-1
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	1.032	0.38	1.569	0.48	2.172	0.58	3-9
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	2.134	0.33	3.251	0.42	5.682	0.58	3-1
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	3.140	0.29	5.508	0.39	10.711	0.58	3-11
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.177	0.37	0.299	0.50	0.376	0.58	3-4
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	2.201	0.33	3.335	0.41	5.854	0.57	3-2
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.345	0.34	0.508	0.42	0.887	0.57	3-1
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	2.138	0.33	3.254	0.41	5.695	0.57	3-1
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.338	0.34	0.500	0.41	0.870	0.57	3-1
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	2.369	0.28	4.384	0.38	8.831	0.57	3-11
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	2.203	0.31	3.372	0.40	4.046	0.57	3-10
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.444	0.33	0.654	0.40	1.182	0.57	3-1
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	2.197	0.33	3.332	0.41	5.841	0.57	3-2
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	2.364	0.27	4.381	0.38	8.814	0.56	3-2
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	2.189	0.33	3.324	0.41	5.814	0.56	3-1
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.470	0.33	0.705	0.41	1.250	0.56	3-8
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	2.193	0.33	3.328	0.41	5.828	0.56	3-2



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	1.030	0.36	1.567	0.46	2.167	0.56	3-9
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	2.301	0.32	3.465	0.40	6.247	0.56	3-2
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.470	0.32	0.705	0.40	1.239	0.56	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.470	0.32	0.705	0.40	1.236	0.55	3-8
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	2.382	0.32	3.582	0.40	6.413	0.55	3-2
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.470	0.32	0.705	0.40	1.243	0.55	3-8
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	2.300	0.32	3.464	0.39	6.240	0.55	3-2
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.380	0.32	0.556	0.40	0.984	0.55	3-1
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	5.341	0.31	8.514	0.40	14.847	0.55	3-10
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.350	0.32	0.514	0.40	0.900	0.55	3-1
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.135	0.36	0.231	0.49	0.276	0.55	3-4
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.135	0.37	0.231	0.49	0.278	0.54	3-4
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	2.386	0.32	3.586	0.40	6.426	0.54	3-2
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	2.259	0.32	3.745	0.41	6.802	0.54	3-10
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.440	0.32	0.647	0.39	1.143	0.54	3-1
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	2.297	0.31	3.461	0.38	6.229	0.54	3-2
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	2.355	0.26	3.331	0.36	5.156	0.53	3-2
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	2.377	0.31	3.578	0.38	6.396	0.53	3-2
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.370	0.31	0.541	0.38	0.958	0.53	3-1
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	1.409	0.31	2.218	0.39	3.775	0.53	3-1
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	0.718	0.31	1.066	0.38	1.883	0.53	3-1
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.442	0.30	0.651	0.37	1.174	0.51	3-1
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.177	0.34	0.299	0.45	0.372	0.51	3-4
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.217	0.30	0.334	0.37	0.586	0.51	3-7
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.147	0.34	0.248	0.45	0.301	0.51	3-4



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.218	0.30	0.321	0.37	0.566	0.51	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.220	0.30	0.324	0.37	0.574	0.51	3-1
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.381	0.29	0.557	0.36	0.990	0.50	3-1
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.186	0.32	0.308	0.41	0.420	0.50	3-4
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.231	0.30	0.340	0.37	0.561	0.49	3-7
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	3.625	0.26	6.130	0.34	12.131	0.49	3-12
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	2.145	0.29	3.263	0.36	5.705	0.49	3-1
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	1.096	0.28	1.667	0.35	2.909	0.48	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	1.084	0.28	1.649	0.35	2.877	0.48	3-1
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.231	0.30	0.339	0.36	0.560	0.48	3-7
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.098	0.29	0.152	0.36	0.254	0.48	3-5
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	3.632	0.26	6.136	0.33	12.154	0.48	3-13
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.135	0.32	0.234	0.43	0.274	0.47	3-4
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	1.406	0.28	2.215	0.35	3.762	0.47	3-1
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.145	0.32	0.245	0.43	0.293	0.47	3-4
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	2.178	0.28	3.313	0.35	5.767	0.47	3-1
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.145	0.31	0.245	0.41	0.296	0.46	3-4
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	4.281	0.25	7.028	0.32	13.208	0.45	3-13
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	4.824	0.26	7.793	0.33	14.148	0.45	3-13
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	5.044	0.26	8.124	0.33	14.433	0.45	3-13
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	4.814	0.25	7.783	0.33	14.323	0.45	3-13
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	3.724	0.24	6.255	0.31	12.315	0.44	3-13
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	5.055	0.26	8.135	0.33	14.464	0.44	3-14
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.094	0.26	0.147	0.33	0.244	0.44	3-4
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.099	0.26	0.153	0.33	0.261	0.43	3-15



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	4.032	0.24	6.682	0.31	12.817	0.43	3-13
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.137	0.25	0.204	0.31	0.373	0.43	3-6
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	3.909	0.23	6.495	0.30	12.620	0.42	3-13
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	3.756	0.23	6.295	0.29	12.375	0.42	3-13
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	3.558	0.22	6.042	0.29	11.959	0.41	3-12
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.071	0.25	0.105	0.30	0.198	0.41	3-6
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.079	0.23	0.115	0.28	0.295	0.40	3-2
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.205	0.26	0.316	0.31	0.563	0.40	3-7
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.005	0.21	0.010	0.31	0.029	0.40	3-5
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.217	0.25	0.334	0.31	0.580	0.40	3-7
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	3.557	0.22	6.041	0.28	11.956	0.39	3-12
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.066	0.24	0.100	0.29	0.170	0.39	3-6
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.204	0.25	0.308	0.31	0.470	0.38	3-7
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.207	0.24	0.316	0.30	0.509	0.38	3-7
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.099	0.23	0.153	0.29	0.264	0.38	3-15
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.208	0.25	0.314	0.30	0.482	0.38	3-7
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.374	0.18	0.569	0.22	0.666	0.38	3-13
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.059	0.24	0.095	0.30	0.137	0.38	3-4
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.150	0.24	0.227	0.29	0.391	0.37	3-7
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.072	0.22	0.109	0.26	0.217	0.37	3-6
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.208	0.24	0.314	0.30	0.483	0.37	3-7
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.102	0.22	0.158	0.28	0.272	0.37	3-15
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.204	0.24	0.308	0.30	0.473	0.37	3-7
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.209	0.21	0.313	0.26	0.595	0.36	3-6
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.205	0.22	0.316	0.27	0.559	0.36	3-7



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.205	0.23	0.313	0.28	0.493	0.36	3-7
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.207	0.22	0.315	0.27	0.510	0.35	3-7
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.197	0.22	0.303	0.27	0.466	0.34	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.201	0.22	0.307	0.27	0.474	0.34	3-5
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.104	0.20	0.160	0.25	0.278	0.33	3-6
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.203	0.20	0.311	0.25	0.487	0.31	3-6
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.150	0.19	0.227	0.23	0.386	0.31	3-7
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.035	0.18	0.052	0.22	0.108	0.30	3-4
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.051	0.18	0.080	0.23	0.133	0.29	3-3
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.052	0.18	0.081	0.22	0.149	0.29	3-3
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.201	0.19	0.307	0.23	0.479	0.29	3-5
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.279	0.23	0.425	0.28	0.469	0.29	3-13
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.150	0.18	0.227	0.22	0.385	0.29	3-7
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.051	0.17	0.080	0.22	0.132	0.28	3-3
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.051	0.17	0.081	0.22	0.131	0.28	3-3
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.161	0.18	0.261	0.23	0.387	0.28	3-5
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.066	0.16	0.100	0.20	0.183	0.27	3-6
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.156	0.17	0.254	0.22	0.370	0.27	3-4
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.055	0.16	0.083	0.19	0.166	0.26	3-6
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.276	0.20	0.422	0.25	0.460	0.26	3-13
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.158	0.17	0.257	0.22	0.377	0.26	3-5
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.051	0.16	0.080	0.20	0.138	0.26	3-3
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.070	0.16	0.104	0.19	0.197	0.26	3-6
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.275	0.20	0.421	0.25	0.458	0.26	3-9
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.023	0.18	0.040	0.24	0.050	0.26	3-4



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.066	0.16	0.099	0.19	0.182	0.26	3-6
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.059	0.16	0.090	0.19	0.163	0.26	3-6
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.056	0.16	0.087	0.19	0.159	0.26	3-3
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.068	0.15	0.102	0.19	0.190	0.26	3-6
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.068	0.15	0.103	0.19	0.187	0.26	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.046	0.15	0.071	0.19	0.130	0.25	3-6
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.053	0.15	0.080	0.18	0.158	0.25	3-6
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.050	0.14	0.075	0.18	0.149	0.25	3-6
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.035	0.13	0.051	0.15	0.131	0.24	3-2
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.059	0.15	0.091	0.18	0.169	0.24	3-6
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.048	0.14	0.073	0.17	0.141	0.24	3-6
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.034	0.16	0.054	0.19	0.079	0.24	3-5
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.068	0.14	0.103	0.17	0.188	0.23	3-6
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.051	0.14	0.080	0.17	0.143	0.23	3-3
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.007	0.14	0.012	0.18	0.039	0.22	3-4
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.029	0.14	0.044	0.17	0.078	0.21	3-4
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.044	0.11	0.065	0.13	0.159	0.20	3-2
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.079	0.11	0.115	0.13	0.293	0.20	3-2
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.035	0.10	0.052	0.12	0.130	0.20	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.044	0.10	0.065	0.12	0.150	0.18	3-2
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.040	0.10	0.058	0.12	0.144	0.18	3-2
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.006	0.10	0.010	0.12	0.025	0.18	3-3
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.005	0.10	0.008	0.12	0.021	0.18	3-3
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.033	0.12	0.051	0.15	0.072	0.18	3-5
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.003	0.10	0.005	0.12	0.013	0.17	3-3



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.038	0.09	0.055	0.11	0.134	0.17	3-2
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.031	0.10	0.047	0.12	0.098	0.17	3-4
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.003	0.06	0.005	0.09	0.018	0.17	3-5
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.12	0.008	0.15	0.028	0.16	3-9
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.009	0.07	0.013	0.09	0.048	0.16	3-2
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.003	0.07	0.005	0.09	0.020	0.16	3-3
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.031	0.09	0.047	0.11	0.094	0.16	3-3
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.007	0.07	0.011	0.08	0.042	0.16	3-2
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.005	0.06	0.008	0.08	0.036	0.16	3-2
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.09	0.000	0.11	0.003	0.16	3-6
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.029	0.11	0.045	0.13	0.062	0.16	3-5
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.009	0.07	0.013	0.08	0.052	0.16	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.009	0.07	0.013	0.09	0.047	0.16	3-2
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.003	0.07	0.005	0.09	0.016	0.16	3-3
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.007	0.07	0.011	0.09	0.037	0.15	3-4
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.022	0.11	0.034	0.13	0.042	0.15	3-5
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.030	0.08	0.046	0.10	0.116	0.15	3-2
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.030	0.09	0.046	0.10	0.100	0.15	3-3
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.029	0.09	0.044	0.11	0.075	0.15	3-4
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.030	0.08	0.046	0.09	0.112	0.15	3-3
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.031	0.08	0.045	0.09	0.100	0.14	3-3
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.029	0.08	0.042	0.10	0.091	0.14	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.029	0.09	0.044	0.11	0.074	0.14	3-4
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.003	0.05	0.004	0.06	0.029	0.14	3-15
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.031	0.08	0.045	0.09	0.098	0.14	3-3



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.007	0.06	0.010	0.08	0.034	0.14	3-4
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.030	0.07	0.046	0.09	0.112	0.14	3-3
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.028	0.08	0.043	0.10	0.088	0.14	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.029	0.08	0.042	0.10	0.085	0.14	3-3
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.007	0.06	0.010	0.08	0.033	0.14	3-3
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.007	0.06	0.011	0.07	0.039	0.13	3-4
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.010	0.08	0.016	0.10	0.022	0.13	3-3
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.029	0.09	0.044	0.10	0.071	0.13	3-4
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.003	0.04	0.004	0.05	0.025	0.13	3-15
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.015	0.08	0.026	0.10	0.042	0.13	3-4
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.030	0.07	0.046	0.08	0.105	0.13	3-3
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.006	0.06	0.009	0.07	0.028	0.12	3-3
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.006	0.08	0.009	0.10	0.018	0.12	3-5
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.023	0.08	0.035	0.10	0.057	0.12	3-4
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.015	0.08	0.026	0.10	0.032	0.12	3-4
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.003	0.05	0.005	0.07	0.014	0.12	3-5
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.008	0.06	0.012	0.07	0.035	0.12	3-6
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.008	0.07	0.013	0.08	0.023	0.11	3-7
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.015	0.07	0.026	0.09	0.038	0.11	3-4
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.002	0.04	0.003	0.05	0.018	0.11	3-3
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.015	0.07	0.026	0.09	0.034	0.11	3-4
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.003	0.07	0.004	0.08	0.013	0.11	3-5
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.008	0.07	0.013	0.08	0.020	0.10	3-7
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.006	0.05	0.009	0.06	0.028	0.10	3-6
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.007	0.08	0.011	0.09	0.014	0.10	3-3



Table A-5 Model Results for 2035 Flows without the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.008	0.07	0.013	0.08	0.018	0.10	3-7
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.009	0.05	0.014	0.06	0.033	0.10	3-7
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.002	0.03	0.003	0.04	0.017	0.09	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.000	0.03	0.000	0.04	0.005	0.09	3-5
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.003	0.05	0.005	0.06	0.010	0.09	3-3
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.004	0.04	0.006	0.05	0.020	0.09	3-6
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.006	0.06	0.009	0.07	0.012	0.08	3-7
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.002	0.03	0.003	0.04	0.014	0.08	3-3
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.003	0.04	0.005	0.04	0.014	0.08	3-6
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.000	0.03	0.000	0.04	0.005	0.07	3-7
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.005	0.04	0.008	0.05	0.013	0.07	3-5
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.001	0.03	0.001	0.04	0.005	0.07	3-5
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.003	0.04	0.005	0.05	0.010	0.07	3-3
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	3-9
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.001	0.03	0.002	0.04	0.005	0.06	3-5
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.000	0.02	0.000	0.03	0.005	0.06	3-6
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.000	0.01	0.000	0.01	0.001	0.03	3-7
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.00	0.000	0.01	0.000	0.02	3-6
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.000	0.01	0.000	0.01	0.000	0.01	3-7
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P164	S4500212-4500211XX	S450MNH0212XX	S450MNH0211XX	16	16	20.8	1.59	1.146	0.86	0.967	0.85	1.860	1.00	3-11
P165	S4500211-4500210XX	S450MNH0211XX	S450MNH0210XX	16	16	31.3	1.18	1.147	0.83	0.967	0.83	1.860	1.00	3-11
P47	S5290202-5290213XX	S529MNH0202XX	S529MNH0213XX	12	12	319.8	0.27	0.674	0.52	1.239	0.81	1.662	1.00	3-7
P110	S5290204-5290202XX	S529MNH0204XX	S529MNH0202XX	12	12	40.0	0.25	0.339	0.52	0.606	0.83	0.661	1.00	3-7
P182	S5130209-5130210XX	S513MNH0209XX	S513MNH0210XX	12	12	63.2	0.41	0.314	0.30	0.481	0.37	0.637	1.00	3-7
P108	S5120211-5120206XX	S512MNH0211XX	S512MNH0206XX	12	12	90.0	0.26	0.340	0.37	0.606	0.51	0.650	1.00	3-7
P107	S5130208-5120211XX	S513MNH0208XX	S512MNH0211XX	12	12	158.3	0.29	0.339	0.36	0.606	0.50	0.671	1.00	3-7
P41	S5130212-5130208XX	S513MNH0212XX	S513MNH0208XX	12	12	244.6	0.20	0.656	0.48	1.220	0.73	1.619	1.00	3-7
P43	S5120209-5120210XX	S512MNH0209XX	S512MNH0210XX	15	15	143.0	0.29	0.316	0.31	0.614	0.42	1.039	1.00	3-7
P42	S5130208-5120209XX	S513MNH0208XX	S512MNH0209XX	15	15	32.0	0.13	0.316	0.27	0.614	0.38	1.037	1.00	3-7
P183	S5130210-5130212XX	S513MNH0210XX	S513MNH0212XX	10	10	263.4	0.84	0.314	0.53	0.481	0.71	0.639	1.00	3-7
P46	S5290202-5290203XX	S529MNH0203XX	S529MNH0202XX	15	15	32.0	0.13	0.335	0.47	0.632	0.71	1.068	1.00	3-7
P50	S5290207-5290208XX	S529MNH0207XX	S529MNH0208XX	12	12	333.0	0.26	0.695	0.57	1.259	0.93	1.696	1.00	3-8
P49	S5290206-5290207XX	S529MNH0206XX	S529MNH0207XX	12	12	216.6	0.31	0.688	0.54	1.253	0.87	1.684	1.00	3-8
P48	S5290213-5290206XX	S529MNH0213XX	S529MNH0206XX	12	12	20.4	0.54	0.687	0.50	1.252	0.79	1.681	1.00	3-8
P109	S5120206-5290204XX	S512MNH0206XX	S529MNH0204XX	12	12	280.0	0.25	0.340	0.43	0.607	0.65	0.655	1.00	3-7
P44	S5120210-5120207XX	S512MNH0210XX	S512MNH0207XX	15	15	74.0	0.00	0.334	0.31	0.631	0.41	1.057	1.00	3-7
P45	S5120207-5290203XX	S512MNH0207XX	S529MNH0203XX	15	15	297.0	0.36	0.334	0.37	0.631	0.54	1.061	1.00	3-7
P51	S5290208-5520204XX	S529MNH0208XX	S552MNH0204XX	12	12	361.0	0.25	0.695	0.54	1.259	0.83	1.700	0.98	3-8
P98	S6500206-6500209XX	S650MNH0206XX	S650MNH0209XX	18	18	468.0	0.16	1.886	0.61	2.435	0.74	3.017	0.95	3-10
P97	S6500207-6500206XX	S650MNH0207XX	S650MNH0206XX	18	18	67.3	0.28	1.882	0.58	2.431	0.70	3.005	0.94	3-10
P150	S5310212-5500209XX	S531MNH0212XX	S550MNH0209XX	27	27	355.6	0.24	6.027	0.58	6.137	0.59	12.160	0.94	3-12
P138	S4710213-4900224XX	S471MNH0213XX	S490MNH0224XX	27	27	1086.8	0.24	5.620	0.54	5.662	0.55	11.277	0.94	3-11
P86	S6520205-6520204XX	S652MNH0205XX	S652MNH0204XX	33	33	10.0	0.10	11.106	0.67	11.753	0.68	19.241	0.92	3-10
P99	S6500209-6510201XX	S650MNH0209XX	S651MNH0201XX	18	18	468.0	0.16	1.890	0.63	2.436	0.75	3.029	0.92	3-10



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P52	S5520204-5520203XX	S552MNH0204XX	S552MNH0203XX	12	12	105.0	0.40	0.695	0.49	1.259	0.71	1.701	0.92	3-8
P85	S6520225-6520205XX	S652MNH0225XX	S652MNH0205XX	33	33	20.7	0.53	11.105	0.66	11.755	0.67	19.093	0.91	3-10
P144	S5110229-5110211XX	S511MNH0229XX	S511MNH0211XX	27	27	206.5	0.58	5.939	0.53	6.044	0.53	11.903	0.88	3-12
P106	S6520208-6520225XX	S652MNH0208XX	S652MNH0225XX	33	33	41.2	0.46	3.004	0.60	3.525	0.61	4.709	0.87	3-10
P242	S3920207-3920206XX	S392MNH0207XX	S392MNH0206XX	8	8	47.5	1.05	0.585	0.58	0.593	0.58	1.068	0.86	3-1
P151	S5500209-5500207XX	S550MNH0209XX	S550MNH0207XX	27	27	31.8	0.03	6.027	0.57	6.137	0.57	12.162	0.85	3-12
P149	S5300202-5310212XX	S530MNH0202XX	S531MNH0212XX	27	27	355.6	0.56	6.024	0.51	6.132	0.51	12.149	0.84	3-12
P181	S5130214-5130209XX	S513MNH0214XX	S513MNH0209XX	12	12	246.4	0.51	0.314	0.30	0.473	0.38	0.628	0.84	3-7
P145	S5110211-5110209XX	S511MNH0211XX	S511MNH0209XX	27	27	295.3	0.13	5.927	0.53	6.033	0.54	11.918	0.84	3-12
P67	S6090201-6090205XX	S609MNH0201XX	S609MNH0205XX	12	15	278.0	0.25	1.052	0.51	1.612	0.66	2.111	0.83	3-9
P68	S6090205-6090202XX	S609MNH0205XX	S609MNH0202XX	12	15	95.0	0.25	1.087	0.51	1.645	0.67	2.149	0.83	3-9
P66	S5920208-6090201XX	S592MNH0208XX	S609MNH0201XX	12	15	373.0	0.25	1.052	0.50	1.613	0.66	2.108	0.83	3-9
P105	S6510210-6520208XX	S651MNH0210XX	S652MNH0208XX	33	33	220.0	0.03	2.911	0.56	3.439	0.58	4.471	0.83	3-10
P65	S5920209-5920208XX	S592MNH0209XX	S592MNH0208XX	12	15	155.0	0.25	1.052	0.50	1.614	0.66	2.104	0.82	3-9
P64	S5920206-5920209XX	S592MNH0206XX	S592MNH0209XX	12	15	218.0	0.25	1.016	0.50	1.579	0.66	2.066	0.82	3-9
P139	S4900224-4900207XX	S490MNH0224XX	S490MNH0207XX	27	27	258.7	0.24	5.665	0.52	5.712	0.53	11.404	0.82	3-11
P63	S5920210-5920206XX	S592MNH0210XX	S592MNH0206XX	12	15	258.0	0.25	1.016	0.49	1.579	0.65	2.064	0.82	3-9
P241	S3920208-3920207XX	S392MNH0208XX	S392MNH0207XX	10	10	215.1	1.12	0.585	0.47	0.593	0.48	1.067	0.81	3-1
P62	S5920207-5920210XX	S592MNH0207XX	S592MNH0210XX	12	15	115.0	0.25	1.016	0.49	1.580	0.65	2.061	0.81	3-9
P163	S4320227-4500212XX	S432MNH0227XX	S450MNH0212XX	16	16	552.4	0.30	1.149	0.60	0.964	0.57	1.858	0.80	3-11
P104	S6510208-6510210XX	S651MNH0208XX	S651MNH0210XX	33	33	110.0	0.10	2.958	0.54	3.496	0.56	4.439	0.80	3-10
P96	S6310208-6500207XX	S631MNH0208XX	S650MNH0207XX	18	18	497.0	0.29	1.882	0.53	2.433	0.64	3.005	0.80	3-10
P61	S5690207-5920207XX	S569MNH0207XX	S592MNH0207XX	12	15	180.0	0.25	0.959	0.48	1.523	0.64	2.001	0.80	3-9
P60	S5690201-5690207XX	S569MNH0201XX	S569MNH0207XX	12	15	200.0	0.25	0.959	0.48	1.523	0.63	1.999	0.79	3-9
P59	S5690202-5690201XX	S569MNH0202XX	S569MNH0201XX	12	15	200.0	0.25	0.959	0.48	1.523	0.63	1.997	0.78	3-9



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P87	S6520214-6520204XX	S652MNH0204XX	S652MNH0214XX	39	39	54.7	0.18	11.125	0.58	11.769	0.58	19.347	0.78	3-10
P137	S4500207-4710213XX	S450MNH0207XX	S471MNH0213XX	27	27	1135.1	0.84	5.593	0.46	5.614	0.46	11.145	0.78	3-11
P142	S4900219-5110214XX	S490MNH0219XX	S511MNH0214XX	27	27	106.7	0.25	5.965	0.49	6.069	0.49	11.899	0.78	3-12
P58	S5690203-5690202XX	S569MNH0203XX	S569MNH0202XX	12	15	244.0	0.26	0.902	0.47	1.466	0.62	1.937	0.77	3-9
P143	S5110214-5110229XX	S511MNH0214XX	S511MNH0229XX	27	27	88.6	0.47	5.951	0.45	6.055	0.45	11.903	0.74	3-12
P141	S4900201-4900219XX	S490MNH0201XX	S490MNH0219XX	27	27	193.4	0.62	5.960	0.47	6.062	0.48	11.846	0.74	3-11
P57	S5690204-5690203XX	S569MNH0204XX	S569MNH0203XX	12	15	331.0	0.23	0.751	0.44	1.316	0.60	1.772	0.74	3-8
P69	S6090202-6100203XX	S609MNH0202XX	S610MNH0203XX	12	15	373.0	0.28	1.087	0.49	1.644	0.61	2.153	0.74	3-9
P78	S5900217-5900219XX	S590MNH0219XX	S590MNH0217XX	18	18	22.7	4.68	0.572	0.47	0.572	0.47	3.486	0.74	3-13
P100	S6510201-6510203XX	S651MNH0201XX	S651MNH0203XX	18	18	468.0	0.17	1.892	0.54	2.437	0.63	3.041	0.73	3-10
P22	S4750214-4470211XX	S475MNH0214XX	S447MNH0211XX	10	10	211.6	0.19	0.306	0.52	0.387	0.61	0.502	0.73	3-4
P103	S6510211-6510208XX	S651MNH0211XX	S651MNH0208XX	33	33	383.0	0.10	2.909	0.47	3.439	0.50	4.391	0.73	3-10
P40	S5130213-5130212XX	S513MNH0213XX	S513MNH0212XX	12	12	353.0	1.30	0.342	0.43	0.736	0.66	0.988	0.71	3-7
P140	CDT-51	S490MNH0207XX	S490MNH0201XX	27	27	23.4	0.13	6.384	0.47	6.493	0.47	12.613	0.71	3-11
P70	S6100203-6100205XX	S610MNH0203XX	S610MNH0205XX	12	15	56.0	0.80	1.559	0.51	2.115	0.61	2.625	0.70	3-9
P56	S5520201-5690204XX	S552MNH0201XX	S569MNH0204XX	12	15	400.0	0.27	0.705	0.41	1.270	0.57	1.723	0.70	3-8
P54	S5520210-5520202XX	S552MNH0210XX	S552MNH0202XX	12	15	173.2	0.25	0.705	0.40	1.270	0.56	1.716	0.69	3-8
P53	S5520203-5520210XX	S552MNH0203XX	S552MNH0210XX	12	15	204.0	0.25	0.705	0.40	1.270	0.56	1.714	0.69	3-8
P95	S6310201-6310208XX	S631MNH0201XX	S631MNH0208XX	18	18	283.9	0.29	1.878	0.51	2.430	0.60	2.991	0.69	3-10
P17	S4460201-4460207XX	S446MNH0201XX	S446MNH0207XX	8	8	127.1	0.83	0.299	0.52	0.362	0.59	0.437	0.69	3-4
P94	S6310202-6310201XX	S631MNH0202XX	S631MNH0201XX	18	18	121.3	0.31	1.875	0.50	2.428	0.59	2.983	0.68	3-10
P55	S5520202-5520201XX	S552MNH0202XX	S552MNH0201XX	12	15	200.0	0.25	0.705	0.40	1.270	0.56	1.718	0.68	3-8
P148	S5300219-5300202XX	S530MNH0219XX	S530MNH0202XX	27	27	395.2	0.56	5.938	0.44	6.045	0.44	11.971	0.68	3-12
P89	CDT-39	S652MNH0212XX	OFALL-14	48	48	28.6	0.35	29.391	0.51	30.548	0.52	51.154	0.68	3-10
P21	S4750216-4750214XX	S475MNH0216XX	S475MNH0214XX	10	10	273.8	0.20	0.307	0.49	0.387	0.57	0.499	0.68	3-5



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P147	S5110218-5300219XX	S511MNH0218XX	S530MNH0219XX	27	27	310.5	0.56	5.933	0.44	6.040	0.44	11.950	0.68	3-12
P146	S5110209-5110218XX	S511MNH0209XX	S511MNH0218XX	27	27	306.6	0.56	5.929	0.44	6.036	0.44	11.934	0.68	3-12
P90	S6290216-6290218XX	S629MNH0216XX	S629MNH0218XX	33	33	36.4	0.93	6.611	0.52	6.686	0.52	9.611	0.66	3-10
P93	S6310203-6310202XX	S631MNH0203XX	S631MNH0202XX	18	18	178.7	0.28	1.569	0.48	2.122	0.57	2.656	0.66	3-9
P20	S4750205-4750216XX	S475MNH0205XX	S475MNH0216XX	10	10	269.5	0.20	0.304	0.49	0.375	0.56	0.482	0.66	3-5
P102	S6510205-6510211XX	S651MNH0205XX	S651MNH0211XX	33	33	132.0	0.09	3.401	0.42	3.875	0.45	4.621	0.65	3-10
P19	S4750206-4750205XX	S475MNH0206XX	S475MNH0205XX	8	8	132.7	1.34	0.299	0.50	0.362	0.56	0.441	0.65	3-5
P18	S4460207-4750206XX	S446MNH0207XX	S475MNH0206XX	8	8	203.1	0.37	0.299	0.50	0.362	0.56	0.439	0.65	3-4
P247	S4090220-4100208XX	S409MNH0220XX	S410MNH0208XX	12	12	388.3	0.49	0.656	0.44	0.664	0.45	1.198	0.64	3-2
P197	S4330204-4330224XX	S433MNH0204XX	S433MNH0224XX	21	21	313.5	0.87	3.446	0.45	3.546	0.46	6.267	0.64	3-2
P92	S6100205-6310203XX	S610MNH0205XX	S631MNH0203XX	18	18	493.5	0.29	1.567	0.46	2.122	0.55	2.650	0.64	3-9
P152	S5500207-5500223XX	S550MNH0207XX	S550MNH0223XX	33	33	239.6	0.17	6.035	0.44	6.145	0.44	12.183	0.63	3-12
P91	S6290218-6290217XX	S629MNH0218XX	S629MNH0217XX	33	33	91.0	0.35	5.650	0.50	5.720	0.50	8.852	0.63	3-10
P231	S3680212-3930211XX	S368MNH0212XX	S393MNH0211XX	15	15	364.7	0.60	1.566	0.44	1.594	0.45	2.770	0.63	3-1
P240	S3690219-3920208XX	S369MNH0219XX	S392MNH0208XX	10	10	325.6	1.11	0.584	0.43	0.593	0.44	1.064	0.63	3-1
P239	S3690209-3690219XX	S369MNH0209XX	S369MNH0219XX	10	10	141.2	1.07	0.577	0.44	0.587	0.44	1.042	0.62	3-1
P11	S4350218-4350220XX	S435MNH0218XX	S435MNH0220XX	8	8	233.7	0.41	0.231	0.49	0.291	0.56	0.339	0.62	3-4
P12	S4350220-4460205XX	S435MNH0220XX	S446MNH0205XX	8	8	137.9	0.36	0.231	0.49	0.291	0.56	0.340	0.61	3-4
P248	S4100208-4310207XX	S410MNH0208XX	S431MNH0207XX	12	12	359.8	0.51	0.659	0.43	0.666	0.44	1.207	0.61	3-2
P88	S6520212-6520214XX	S652MNH0214XX	S652MNH0212XX	48	48	51.1	0.37	25.858	0.43	26.442	0.44	45.753	0.60	3-10
P250	S4320232-4320227XX	S432MNH0232XX	S432MNH0227XX	16	16	304.0	0.33	1.207	0.45	0.959	0.41	1.841	0.60	3-2
P224	S4080205-4080206XX	S408MNH0205XX	S408MNH0206XX	21	21	69.0	0.75	3.317	0.43	3.341	0.43	5.813	0.60	3-1
P101	S6510203-6510205XX	S651MNH0203XX	S651MNH0205XX	36	36	477.5	0.05	3.372	0.40	3.984	0.43	4.548	0.59	3-10
P288	S5280205-5290213XX	S528MNH0205XX	S529MNH0213XX	12	12	325.0	0.50	0.014	0.06	0.015	0.06	0.048	0.59	3-7
P135	S4310214-4500210XX	S431MNH0214XX	S450MNH0210XX	27	27	278.2	0.52	4.387	0.39	4.524	0.39	8.988	0.59	3-11



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P249	S4320232-4310207XX	S431MNH0207XX	S432MNH0232XX	14	14	227.5	0.10	1.345	0.58	0.952	0.55	1.822	0.58	3-2
P136	S4500210-4500207XX	S450MNH0210XX	S450MNH0207XX	27	27	187.5	0.64	5.508	0.39	5.472	0.39	10.854	0.58	3-11
P225	S4080206-4080209XX	S408MNH0206XX	S408MNH0209XX	21	21	290.8	0.73	3.320	0.42	3.344	0.42	5.825	0.58	3-1
P218	S3930207-3930209XX	S393MNH0207XX	S393MNH0209XX	21	21	283.9	0.31	2.221	0.42	2.222	0.42	3.788	0.58	3-1
P26	S4470208-4470210XX	S447MNH0208XX	S447MNH0210XX	10	10	370.0	0.20	0.152	0.36	0.256	0.48	0.353	0.58	3-5
P219	S3930209-3930212XX	S393MNH0209XX	S393MNH0212XX	21	21	311.0	0.82	3.251	0.42	3.267	0.42	5.699	0.58	3-1
P229	S4330208-4330204XX	S433MNH0208XX	S433MNH0204XX	21	21	309.1	0.87	3.335	0.41	3.359	0.42	5.879	0.58	3-2
P234	S3930226-3930227XX	S393MNH0226XX	S393MNH0227XX	14	14	329.4	0.16	0.508	0.42	0.518	0.42	0.894	0.58	3-1
P134	S4320228-4310214XX	S432MNH0228XX	S431MNH0214XX	27	27	300.7	0.50	4.384	0.38	4.521	0.39	8.973	0.58	3-11
P233	S3930211-3930226XX	S393MNH0211XX	S393MNH0226XX	14	14	242.7	0.17	0.500	0.41	0.509	0.42	0.877	0.58	3-1
P23	S4470211-4470201XX	S447MNH0211XX	S447MNH0201XX	10	10	381.0	0.21	0.308	0.41	0.390	0.49	0.510	0.58	3-4
P220	S3930212-3930213XX	S393MNH0212XX	S393MNH0213XX	21	21	293.7	0.71	3.254	0.41	3.271	0.42	5.712	0.57	3-1
P133	S4320235-4320228XX	S432MNH0235XX	S432MNH0228XX	27	27	268.0	0.55	4.381	0.38	4.518	0.38	8.956	0.57	3-2
P246	S4090221-4090220XX	S409MNH0221XX	S409MNH0220XX	12	12	258.4	1.08	0.654	0.40	0.662	0.40	1.190	0.57	3-1
P128	S4320204-4320205XX	S432MNH0204XX	S432MNH0205XX	27	27	32.6	0.31	3.465	0.40	3.651	0.41	6.441	0.57	3-2
P228	S4330210-4330208XX	S433MNH0210XX	S433MNH0208XX	21	21	310.5	0.87	3.332	0.41	3.355	0.41	5.865	0.57	3-2
P226	S4080209-4080231XX	S408MNH0209XX	S408MNH0231XX	21	21	314.0	0.86	3.324	0.41	3.348	0.41	5.839	0.57	3-1
P227	S4080231-4330210XX	S408MNH0231XX	S433MNH0210XX	21	21	320.0	0.88	3.328	0.41	3.351	0.41	5.852	0.57	3-2
P16	S4460202-4460201XX	S446MNH0202XX	S446MNH0201XX	8	8	84.8	0.83	0.299	0.45	0.362	0.50	0.435	0.57	3-4
P15	S4460203-4460202XX	S446MNH0203XX	S446MNH0202XX	8	8	166.9	0.58	0.248	0.45	0.308	0.51	0.363	0.56	3-4
P130	S4320213-4320220XX	S432MNH0213XX	S432MNH0220XX	27	27	305.2	0.40	3.582	0.40	3.768	0.41	6.606	0.56	3-2
P127	S4320202-4320204XX	S432MNH0202XX	S432MNH0204XX	27	27	206.1	0.29	3.464	0.39	3.650	0.40	6.434	0.56	3-2
P84	S6290217-6520225XX	S629MNH0217XX	S652MNH0225XX	42	42	517.4	0.47	8.514	0.40	8.638	0.40	15.089	0.55	3-10
P180	S5130207-5130214XX	S513MNH0207XX	S513MNH0214XX	12	12	254.0	0.50	0.308	0.30	0.462	0.37	0.615	0.55	3-7
P237	S3690201-3690218XX	S369MNH0201XX	S369MNH0218XX	14	14	60.5	0.26	0.556	0.40	0.565	0.40	0.992	0.55	3-1



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P131	S4320220-4320230XX	S432MNH0220XX	S432MNH0230XX	27	27	248.8	0.20	3.586	0.40	3.772	0.41	6.620	0.55	3-2
P235	S3930227-3690214XX	S393MNH0227XX	S369MNH0214XX	14	14	277.8	0.18	0.514	0.40	0.524	0.40	0.908	0.55	3-1
P126	S4330224-4320202XX	S433MNH0224XX	S432MNH0202XX	27	27	299.8	0.32	3.461	0.38	3.647	0.39	6.423	0.55	3-2
P83	S6290216-6290217XX	S629MNH0216XX	S629MNH0217XX	33	33	127.1	0.02	3.745	0.41	3.804	0.41	6.919	0.54	3-10
P129	S4320205-4320213XX	S432MNH0205XX	S432MNH0213XX	27	27	290.4	0.28	3.578	0.38	3.763	0.39	6.590	0.54	3-2
P244	S3920205-3920204XX	S392MNH0205XX	S392MNH0204XX	10	10	34.4	4.08	0.647	0.39	0.656	0.39	1.151	0.54	3-1
P132	S4320230-4320235XX	S432MNH0230XX	S432MNH0235XX	27	27	12.4	0.81	3.331	0.36	3.489	0.37	5.298	0.54	3-2
P10	S4350201-4350218XX	S435MNH0201XX	S435MNH0218XX	8	8	17.8	1.12	0.234	0.43	0.291	0.49	0.336	0.54	3-4
P236	S3690214-3690201XX	S369MNH0214XX	S369MNH0201XX	14	14	323.4	0.26	0.541	0.38	0.550	0.39	0.966	0.53	3-1
P232	S3930211-3930209XX	S393MNH0211XX	S393MNH0209XX	15	15	54.6	0.68	1.066	0.38	1.086	0.39	1.899	0.53	3-1
P217	S3940204-3930207XX	S394MNH0204XX	S393MNH0207XX	21	21	274.5	0.72	2.218	0.39	2.219	0.39	3.776	0.53	3-1
P27	S4470210-4480204XX	S447MNH0210XX	S448MNH0204XX	10	10	386.3	0.18	0.153	0.33	0.267	0.44	0.368	0.53	3-15
P13	S4460205-4460204XX	S446MNH0205XX	S446MNH0204XX	8	8	69.1	0.43	0.245	0.43	0.306	0.48	0.355	0.53	3-4
P245	S3920204-4090221XX	S392MNH0204XX	S409MNH0221XX	12	12	648.5	0.88	0.651	0.37	0.659	0.37	1.182	0.52	3-1
P25	S4470207-4470208XX	S447MNH0207XX	S447MNH0208XX	10	10	100.0	0.20	0.147	0.33	0.219	0.42	0.314	0.52	3-4
P118	S4880209-4880210XX	S488MNH0209XX	S488MNH0210XX	12	12	353.5	0.16	0.204	0.31	0.341	0.42	0.497	0.51	3-6
P14	S4460204-4460203XX	S446MNH0204XX	S446MNH0203XX	8	8	321.8	1.12	0.245	0.41	0.306	0.47	0.358	0.51	3-4
P251	S3920206-3920205XX	S392MNH0206XX	S392MNH0205XX	10	10	208.0	0.43	0.321	0.37	0.326	0.37	0.571	0.51	3-1
P243	CDT-81	S392MNH0206XX	S392MNH0205XX	10	10	204.0	0.44	0.324	0.37	0.329	0.37	0.579	0.51	3-1
P238	S3690209-3690218XX	S369MNH0218XX	S369MNH0209XX	14	14	329.4	0.26	0.557	0.36	0.566	0.36	0.999	0.50	3-1
P38	S4880211-4880210XX	S488MNH0211XX	S488MNH0210XX	10	10	30.0	0.83	0.109	0.26	0.344	0.43	0.435	0.50	3-6
P155	S5500201-5500225XX	S550MNH0201XX	S550MNH0225XX	42	42	15.0	0.07	6.130	0.34	6.240	0.35	12.379	0.50	3-12
P221	S3930213-3930214XX	S393MNH0213XX	S393MNH0214XX	21	21	44.7	0.90	3.263	0.36	3.287	0.36	5.729	0.49	3-1
P230	S3930216-4080205XX	S393MNH0216XX	S408MNH0205XX	24	24	232.5	0.23	1.667	0.35	1.679	0.35	2.921	0.49	3-1
P223	CDT-83	S393MNH0216XX	S408MNH0205XX	24	24	237.8	0.22	1.649	0.35	1.661	0.35	2.889	0.49	3-1



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P156	S5500225-5710212XX	S550MNH0225XX	S571MNH0212XX	42	42	286.5	0.14	6.136	0.33	6.247	0.34	12.402	0.48	3-13
P117	S4880208-4880209XX	S488MNH0208XX	S488MNH0209XX	10	10	30.0	0.83	0.105	0.30	0.171	0.37	0.262	0.47	3-6
P216	S3940201-3940204XX	S394MNH0201XX	S394MNH0204XX	21	21	49.8	0.60	2.215	0.35	2.216	0.35	3.764	0.47	3-1
P262	S4750204-4750205XX	S475MNH0204XX	S475MNH0205XX	10	10	137.7	0.22	0.010	0.31	0.022	0.37	0.039	0.47	3-5
P222	S3930214-3930216XX	S393MNH0214XX	S393MNH0216XX	21	21	83.1	2.32	3.313	0.35	3.337	0.35	5.791	0.47	3-1
P39	S4880210-5130213XX	S488MNH0210XX	S513MNH0213XX	12	12	361.0	0.70	0.313	0.26	0.685	0.39	0.933	0.46	3-6
P28	S4480204-4480203XX	S448MNH0204XX	S448MNH0203XX	10	10	234.0	0.48	0.153	0.29	0.267	0.38	0.370	0.46	3-15
P161	S5900216-5900217XX	S590MNH0216XX	S590MNH0217XX	42	42	600.9	0.28	7.028	0.32	7.144	0.33	13.457	0.46	3-13
P80	S6110209-6110210XX	S611MNH0209XX	S611MNH0210XX	42	42	412.2	0.34	7.793	0.33	7.916	0.33	14.400	0.46	3-13
P81	S6110210-6300209XX	S611MNH0210XX	S630MNH0209XX	42	42	620.0	0.23	8.124	0.33	8.247	0.33	14.678	0.46	3-13
P79	S5900217-6110209XX	S590MNH0217XX	S611MNH0209XX	42	42	380.0	0.23	7.783	0.33	7.906	0.33	14.585	0.45	3-13
P174	S4870204-4880202XX	S487MNH0204XX	S488MNH0202XX	12	12	471.4	0.51	0.316	0.30	0.515	0.39	0.689	0.45	3-7
P157	S5710212-5710211XX	S571MNH0212XX	S571MNH0211XX	42	42	362.0	0.18	6.255	0.31	6.365	0.31	12.563	0.44	3-13
P179	S5130206-5130207XX	S513MNH0206XX	S513MNH0207XX	12	12	320.6	0.39	0.308	0.31	0.457	0.38	0.608	0.44	3-7
P184	S4880201-4880209XX	S488MNH0201XX	S488MNH0209XX	12	12	452.8	0.13	0.100	0.29	0.162	0.36	0.225	0.44	3-6
P29	S4480203-4480202XX	S448MNH0203XX	S448MNH0202XX	10	10	243.0	0.34	0.158	0.28	0.272	0.37	0.378	0.44	3-15
P82	S6300209-6290216XX	S630MNH0209XX	S629MNH0216XX	42	42	444.2	0.36	8.135	0.33	8.258	0.33	14.708	0.44	3-14
P24	S4470201-4470207XX	S447MNH0201XX	S447MNH0207XX	10	10	319.1	0.18	0.095	0.30	0.144	0.37	0.184	0.44	3-4
P160	S5900215-5900216XX	S590MNH0215XX	S590MNH0216XX	42	42	130.0	0.26	6.682	0.31	6.793	0.31	13.066	0.44	3-13
P178	S4880205-5130206XX	S488MNH0205XX	S513MNH0206XX	12	12	296.4	0.43	0.227	0.29	0.369	0.37	0.519	0.43	3-7
P159	S5710216-5900215XX	S571MNH0216XX	S590MNH0215XX	42	42	581.9	0.28	6.495	0.30	6.605	0.30	12.868	0.43	3-13
P158	S5710211-5710216XX	S571MNH0211XX	S571MNH0216XX	42	42	364.9	0.28	6.295	0.29	6.404	0.29	12.624	0.42	3-13
P173	S4870203-4870204XX	S487MNH0203XX	S487MNH0204XX	12	12	274.6	0.83	0.313	0.28	0.497	0.36	0.662	0.42	3-7
P154	S5500202-5500201XX	S550MNH0202XX	S550MNH0201XX	33	33	50.0	17.13	6.042	0.29	6.152	0.29	12.207	0.42	3-12
P196	S4330203-4330204XX	S433MNH0203XX	S433MNH0204XX	18	18	78.0	1.58	0.115	0.28	0.210	0.30	0.377	0.42	3-2



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P175	S4880202-4880201XX	S488MNH0202XX	S488MNH0201XX	12	12	117.9	0.51	0.315	0.27	0.515	0.34	0.691	0.41	3-7
P153	S5500223-5500202XX	S550MNH0223XX	S550MNH0202XX	33	33	301.8	0.12	6.041	0.28	6.151	0.29	12.204	0.40	3-12
P30	S4480202-4730209XX	S448MNH0202XX	S473MNH0209XX	10	10	273.6	0.69	0.160	0.25	0.274	0.33	0.383	0.39	3-6
P169	S4740204-4740211XX	S474MNH0204XX	S474MNH0211XX	12	12	206.5	1.19	0.303	0.27	0.456	0.33	0.609	0.39	3-5
P170	S4740211-4870201XX	S474MNH0211XX	S487MNH0201XX	12	12	211.8	0.49	0.307	0.27	0.470	0.33	0.625	0.39	3-5
P77	S6110203-5900219XX	S611MNH0203XX	S590MNH0219XX	18	18	357.0	0.23	0.569	0.22	0.569	0.22	0.666	0.38	3-13
P172	S4870202-4870203XX	S487MNH0202XX	S487MNH0203XX	12	12	256.9	1.27	0.311	0.25	0.495	0.31	0.656	0.36	3-6
P177	S4880204-4880205XX	S488MNH0204XX	S488MNH0205XX	12	12	56.6	1.15	0.227	0.23	0.367	0.30	0.512	0.36	3-7
P171	S4870201-4870202XX	S487MNH0201XX	S487MNH0202XX	12	12	257.5	1.27	0.307	0.23	0.469	0.29	0.629	0.34	3-5
P215	S4470206-4470207XX	S447MNH0206XX	S447MNH0207XX	10	10	269.7	1.90	0.052	0.22	0.076	0.27	0.129	0.34	3-4
P176	S4880201-4880204XX	S488MNH0201XX	S488MNH0204XX	12	12	18.5	0.65	0.227	0.22	0.367	0.28	0.511	0.33	3-7
P35	S4880214-4880213XX	S488MNH0214XX	S488MNH0213XX	10	10	351.0	0.70	0.083	0.19	0.187	0.28	0.259	0.33	3-6
P168	S4740212-4740204XX	S474MNH0212XX	S474MNH0204XX	12	12	295.0	1.18	0.261	0.23	0.408	0.28	0.529	0.32	3-5
P36	S4880213-4880212XX	S488MNH0213XX	S488MNH0212XX	10	10	287.0	0.69	0.103	0.19	0.218	0.28	0.292	0.32	3-6
P166	S4470201-4740205XX	S447MNH0201XX	S474MNH0205XX	12	12	307.6	1.00	0.254	0.22	0.389	0.27	0.503	0.31	3-4
P167	S4740205-4740212XX	S474MNH0205XX	S474MNH0212XX	12	12	297.5	1.18	0.257	0.22	0.394	0.27	0.512	0.31	3-5
P114	S4880206-4880216XX	S488MNH0206XX	S488MNH0216XX	10	10	14.8	0.67	0.100	0.20	0.165	0.25	0.241	0.31	3-6
P34	S4730207-4880214XX	S473MNH0207XX	S488MNH0214XX	10	10	364.6	0.68	0.080	0.18	0.155	0.26	0.224	0.31	3-6
P116	S4880207-4880208XX	S488MNH0207XX	S488MNH0208XX	10	10	313.6	0.90	0.104	0.19	0.170	0.24	0.255	0.30	3-6
P203	S4340204-4340205XX	S434MNH0204XX	S434MNH0205XX	12	12	303.6	0.14	0.081	0.22	0.086	0.23	0.155	0.30	3-3
P111	S4730209-4730205XX	S473MNH0209XX	S473MNH0205XX	10	10	352.4	0.51	0.090	0.19	0.154	0.25	0.221	0.30	3-6
P33	S4730208-4730207XX	S473MNH0208XX	S473MNH0207XX	10	10	353.9	0.61	0.075	0.18	0.151	0.25	0.216	0.30	3-6
P200	S4070202-4070201XX	S407MNH0202XX	S407MNH0201XX	10	10	57.5	0.30	0.080	0.23	0.083	0.23	0.136	0.30	3-3
P113	S4730206-4880206XX	S473MNH0206XX	S488MNH0206XX	10	10	347.0	0.89	0.099	0.19	0.164	0.25	0.239	0.30	3-6
P31	S4730209-4480209XX	S473MNH0209XX	S448MNH0209XX	10	10	393.3	0.35	0.071	0.19	0.122	0.24	0.177	0.30	3-6



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P37	S4880212-4880211XX	S488MNH0212XX	S488MNH0211XX	10	10	46.4	1.21	0.103	0.17	0.218	0.25	0.293	0.29	3-6
P115	S4880216-4880207XX	S488MNH0216XX	S488MNH0207XX	10	10	353.6	0.91	0.102	0.19	0.167	0.24	0.248	0.29	3-6
P76	S6110202-6110203XX	S611MNH0202XX	S611MNH0203XX	18	18	323.0	0.18	0.425	0.28	0.425	0.28	0.469	0.29	3-13
P296	S4350215-4350201XX	S435MNH0215XX	S435MNH0201XX	8	8	68.7	8.08	0.040	0.24	0.047	0.27	0.058	0.29	3-4
P122	S4480219-4330229XX	S448MNH0219XX	S433MNH0229XX	10	10	266.9	0.27	0.011	0.08	0.110	0.26	0.135	0.28	3-2
P199	S4070203-4070202XX	S407MNH0203XX	S407MNH0202XX	10	10	80.0	0.30	0.080	0.22	0.083	0.22	0.136	0.28	3-3
P32	S4480209-4730208XX	S448MNH0209XX	S473MNH0208XX	10	10	342.9	0.72	0.073	0.17	0.124	0.23	0.187	0.28	3-6
P198	S4060210-4070203XX	S406MNH0210XX	S407MNH0203XX	10	10	266.0	0.30	0.081	0.22	0.083	0.22	0.135	0.28	3-3
P112	S4730205-4730206XX	S473MNH0205XX	S473MNH0206XX	10	10	352.0	0.94	0.091	0.18	0.155	0.23	0.227	0.28	3-6
P9	S4350202-4350201XX	S435MNH0202XX	S435MNH0201XX	10	10	14.0	1.43	0.012	0.18	0.097	0.25	0.117	0.28	3-4
P212	S4330207-4330206XX	S433MNH0207XX	S433MNH0206XX	15	15	20.0	0.10	0.051	0.15	0.099	0.21	0.173	0.28	3-2
P124	S4330212-4330230XX	S433MNH0212XX	S433MNH0230XX	10	10	50.0	0.40	0.013	0.09	0.117	0.25	0.143	0.28	3-2
P123	S4330229-4330212XX	S433MNH0229XX	S433MNH0212XX	10	10	180.0	0.40	0.013	0.09	0.115	0.24	0.142	0.27	3-2
P258	S4470202-4470201XX	S447MNH0202XX	S447MNH0201XX	12	12	130.0	0.50	0.044	0.17	0.148	0.24	0.174	0.27	3-4
P204	S4340205-4340214XX	S434MNH0205XX	S434MNH0214XX	10	10	308.0	0.19	0.087	0.19	0.099	0.20	0.173	0.27	3-3
P201	S4070201-4340203XX	S407MNH0201XX	S434MNH0203XX	10	10	327.6	0.30	0.080	0.20	0.083	0.20	0.141	0.27	3-3
P75	S6110201-6110202XX	S611MNH0201XX	S611MNH0202XX	18	18	65.0	0.23	0.422	0.25	0.422	0.25	0.460	0.26	3-13
P125	S4330230-4330224XX	S433MNH0230XX	S433MNH0224XX	10	10	100.0	0.39	0.013	0.08	0.117	0.23	0.146	0.26	3-2
P74	S6100207-6110201XX	S610MNH0207XX	S611MNH0201XX	18	18	388.0	0.20	0.421	0.25	0.421	0.25	0.458	0.26	3-9
P7	S4350214-4350206XX	S435MNH0214XX	S435MNH0206XX	10	10	185.0	0.35	0.011	0.09	0.097	0.24	0.115	0.26	3-4
P268	S4740203-4740204XX	S474MNH0203XX	S474MNH0204XX	12	12	280.3	0.19	0.054	0.19	0.042	0.21	0.069	0.26	3-5
P121	S4480208-4480219XX	S448MNH0208XX	S448MNH0219XX	10	10	297.0	0.29	0.008	0.08	0.044	0.22	0.067	0.25	3-2
P3	S4340201-4350211XX	S434MNH0201XX	S435MNH0211XX	10	10	300.0	0.03	0.005	0.09	0.040	0.22	0.050	0.25	3-3
P2	S4350219-4340201XX	S435MNH0219XX	S434MNH0201XX	10	10	395.0	0.33	0.005	0.09	0.033	0.21	0.040	0.24	3-3
P202	S4340203-4340204XX	S434MNH0203XX	S434MNH0204XX	12	12	315.3	0.71	0.080	0.17	0.082	0.18	0.146	0.24	3-3



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P194	S4330225-4330206XX	S433MNH0225XX	S433MNH0206XX	15	15	100.0	0.46	0.065	0.13	0.112	0.17	0.199	0.23	3-2
P6	S4350213-4350214XX	S435MNH0213XX	S435MNH0214XX	10	10	79.0	0.43	0.010	0.08	0.070	0.21	0.087	0.23	3-4
P195	S4330206-4330203XX	S433MNH0206XX	S433MNH0203XX	15	15	185.7	0.31	0.115	0.13	0.210	0.17	0.375	0.23	3-2
P211	S4330213-4330207XX	S433MNH0213XX	S433MNH0207XX	15	15	335.0	0.36	0.052	0.12	0.100	0.17	0.171	0.22	3-2
P8	S4350206-4350202XX	S435MNH0206XX	S435MNH0202XX	10	10	129.0	0.30	0.011	0.07	0.097	0.20	0.116	0.22	3-4
P257	S4470209-4470202XX	S447MNH0209XX	S447MNH0202XX	12	12	103.0	0.51	0.044	0.11	0.148	0.20	0.172	0.22	3-4
P261	S4750203-4750204XX	S475MNH0203XX	S475MNH0204XX	10	10	250.5	0.16	0.005	0.09	0.014	0.15	0.026	0.22	3-5
P5	S4350212-4350213XX	S435MNH0212XX	S435MNH0213XX	10	10	300.0	0.33	0.010	0.08	0.070	0.19	0.086	0.22	3-3
P256	S4470203-4470209XX	S447MNH0203XX	S447MNH0209XX	12	12	197.0	0.69	0.044	0.11	0.148	0.20	0.171	0.21	3-4
P254	S4080202-4080201XX	S408MNH0202XX	S408MNH0201XX	10	10	212.0	0.78	0.010	0.12	0.017	0.16	0.031	0.21	3-3
P192	S4080211-4330211XX	S408MNH0211XX	S433MNH0211XX	15	15	270.3	0.39	0.058	0.12	0.105	0.16	0.184	0.21	3-2
P193	S4330211-4330225XX	S433MNH0211XX	S433MNH0225XX	15	15	367.6	0.20	0.065	0.12	0.112	0.16	0.189	0.21	3-2
P255	S4460210-4470203XX	S446MNH0210XX	S447MNH0203XX	12	12	300.0	0.74	0.044	0.10	0.148	0.19	0.170	0.20	3-4
P4	S4350211-4350212XX	S435MNH0211XX	S435MNH0212XX	10	10	302.0	0.60	0.009	0.07	0.060	0.18	0.073	0.20	3-3
P253	S4080203-4080202XX	S408MNH0203XX	S408MNH0202XX	10	10	347.4	0.01	0.008	0.12	0.014	0.15	0.026	0.20	3-3
P295	S4460209-4460210XX	S446MNH0209XX	S446MNH0210XX	12	12	300.0	0.73	0.035	0.10	0.129	0.18	0.149	0.19	3-4
P191	S4080201-4080211XX	S408MNH0201XX	S408MNH0211XX	15	15	396.9	0.25	0.055	0.11	0.101	0.15	0.173	0.19	3-2
P120	S4480205-4480208XX	S448MNH0205XX	S448MNH0208XX	10	10	279.0	0.30	0.004	0.06	0.032	0.15	0.052	0.19	3-15
P252	S4080204-4080203XX	S408MNH0204XX	S408MNH0203XX	10	10	329.6	0.31	0.005	0.12	0.006	0.14	0.014	0.19	3-3
P278	S4730203-4730209XX	S473MNH0203XX	S473MNH0209XX	10	10	214.0	0.94	0.000	0.11	0.000	0.14	0.003	0.18	3-6
P214	S4470205-4470206XX	S447MNH0205XX	S447MNH0206XX	10	10	260.4	1.12	0.047	0.12	0.057	0.13	0.108	0.18	3-4
P283	S4330227-4480205XX	S433MNH0227XX	S448MNH0205XX	10	10	415.0	0.28	0.004	0.05	0.032	0.14	0.048	0.17	3-15
P210	S4330202-4330213XX	S433MNH0202XX	S433MNH0213XX	15	15	170.0	0.35	0.046	0.10	0.084	0.13	0.150	0.17	3-2
P294	S4460208-4460209XX	S446MNH0208XX	S446MNH0209XX	10	10	300.0	1.13	0.026	0.10	0.031	0.15	0.048	0.17	3-4
P213	S4340214-4470205XX	S434MNH0214XX	S447MNH0205XX	10	10	264.7	2.03	0.047	0.11	0.057	0.12	0.104	0.17	3-3



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P206	S4340211-4340207XX	S434MNH0211XX	S434MNH0207XX	15	15	409.3	0.20	0.046	0.10	0.074	0.13	0.124	0.17	3-3
P209	S4330226-4330202XX	S433MNH0226XX	S433MNH0202XX	15	15	11.0	0.36	0.046	0.09	0.084	0.13	0.147	0.17	3-3
P73	S6100210-6100207XX	S610MNH0210XX	S610MNH0207XX	18	18	388.0	0.20	0.008	0.15	0.008	0.15	0.028	0.16	3-9
P267	S4740202-4740203XX	S474MNH0202XX	S474MNH0203XX	12	12	293.9	0.29	0.051	0.15	0.038	0.13	0.061	0.16	3-5
P287	S5280204-5280205XX	S528MNH0204XX	S528MNH0205XX	10	10	156.0	0.50	0.013	0.08	0.013	0.08	0.024	0.16	3-7
P190	S4080229-4080201XX	S408MNH0229XX	S408MNH0201XX	15	15	75.0	1.04	0.045	0.09	0.079	0.13	0.129	0.16	3-3
P188	S4340213-4080230XX	S434MNH0213XX	S408MNH0230XX	12	12	366.0	0.96	0.042	0.10	0.074	0.13	0.119	0.16	3-3
P186	S4070204-4070206XX	S407MNH0204XX	S407MNH0206XX	10	10	262.4	0.51	0.016	0.10	0.033	0.14	0.038	0.16	3-3
P189	S4080230-4080229XX	S408MNH0230XX	S408MNH0229XX	12	12	280.2	0.96	0.045	0.09	0.079	0.12	0.128	0.16	3-3
P208	S4330214-4330226XX	S433MNH0214XX	S433MNH0226XX	15	15	319.5	0.59	0.046	0.09	0.084	0.12	0.146	0.16	3-3
P187	S4070206-4340213XX	S407MNH0206XX	S434MNH0213XX	12	12	186.8	0.89	0.042	0.10	0.074	0.13	0.113	0.16	3-3
P282	S4330228-4330227XX	S433MNH0228XX	S433MNH0227XX	10	10	36.1	0.44	0.003	0.05	0.020	0.12	0.033	0.15	3-3
P205	S4340214-4340211XX	S434MNH0214XX	S434MNH0211XX	15	15	426.4	1.11	0.043	0.10	0.053	0.12	0.098	0.15	3-3
P1	S4350210-4350219XX	S435MNH0210XX	S435MNH0219XX	10	10	390.0	0.33	0.005	0.06	0.033	0.14	0.037	0.15	3-3
P260	S4760202-4750203XX	S476MNH0202XX	S475MNH0203XX	10	10	350.4	0.14	0.005	0.07	0.014	0.11	0.022	0.14	3-5
P207	S4340207-4330214XX	S434MNH0207XX	S433MNH0214XX	15	15	267.8	0.58	0.046	0.08	0.073	0.11	0.130	0.14	3-3
P266	S4750209-4740202XX	S475MNH0209XX	S474MNH0202XX	12	12	237.9	0.32	0.045	0.13	0.030	0.11	0.049	0.14	3-5
P185	S4070213-4070204XX	S407MNH0213XX	S407MNH0204XX	10	10	278.2	0.20	0.011	0.09	0.022	0.13	0.025	0.13	3-3
P281	S4340206-4330228XX	S434MNH0206XX	S433MNH0228XX	10	10	208.5	0.43	0.003	0.04	0.020	0.10	0.032	0.13	3-3
P297	S4350215-4350216XX	S435MNH0215XX	S435MNH0216XX	8	8	95.0	3.31	0.026	0.10	0.030	0.11	0.037	0.13	3-4
P271	S4750215-4750209XX	S475MNH0215XX	S475MNH0209XX	10	10	40.4	0.79	0.034	0.13	0.011	0.10	0.019	0.12	3-5
P293	S4350217-4460208XX	S435MNH0217XX	S446MNH0208XX	10	10	300.0	1.13	0.026	0.09	0.031	0.10	0.044	0.12	3-4
P265	S4750210-4750209XX	S475MNH0210XX	S475MNH0209XX	10	10	250.7	1.84	0.009	0.10	0.017	0.10	0.024	0.12	3-5
P276	S4880215-4880201XX	S488MNH0215XX	S488MNH0201XX	10	10	338.0	0.77	0.012	0.07	0.013	0.07	0.036	0.12	3-6
P292	S4350216-4350217XX	S435MNH0216XX	S435MNH0217XX	10	10	160.0	1.10	0.026	0.09	0.031	0.10	0.040	0.11	3-4



Table A-6 Model Results for (2035) Flows with the PPSP Contribution

Pipe ID ²	Sewer Main ID	Upstream MH ID	Downstream MH ID	Ex. D.(in.)	WWMP CIP D. (in.)	Length (ft.)	Slope (%)	ADWF ¹		PDWF ¹		PWWF ¹		Figure
								Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P291	S5280206-5280205XX	S528MNH0206XX	S528MNH0205XX	12	12	240.0	0.50	0.000	0.04	0.001	0.05	0.006	0.11	3-7
P280	S4340212-4340206XX	S434MNH0212XX	S434MNH0206XX	10	10	320.3	0.87	0.003	0.04	0.015	0.09	0.025	0.11	3-3
P259	S4760201-4760202XX	S476MNH0201XX	S476MNH0202XX	10	10	356.4	0.15	0.000	0.04	0.002	0.08	0.007	0.11	3-5
P286	S5280203-5280204XX	S528MNH0203XX	S528MNH0204XX	10	10	185.0	0.42	0.013	0.08	0.013	0.08	0.021	0.10	3-7
P275	S4880203-4880215XX	S488MNH0203XX	S488MNH0215XX	10	10	358.2	1.32	0.009	0.06	0.010	0.06	0.028	0.10	3-6
P270	S4750217-4750215XX	S475MNH0217XX	S475MNH0215XX	10	10	300.0	0.30	0.004	0.08	0.011	0.08	0.019	0.10	3-5
P285	S5280202-5280203XX	S528MNH0202XX	S528MNH0203XX	10	10	195.0	0.50	0.013	0.08	0.013	0.08	0.018	0.10	3-7
P269	S4860203-4750217XX	S486MNH0203XX	S475MNH0217XX	10	10	316.3	0.77	0.001	0.04	0.005	0.07	0.009	0.09	3-5
P274	S4730204-4880203XX	S473MNH0204XX	S488MNH0203XX	10	10	360.3	1.03	0.006	0.05	0.006	0.05	0.020	0.09	3-6
P284	S5280208-5280202XX	S528MNH0208XX	S528MNH0202XX	10	10	254.0	0.56	0.009	0.07	0.009	0.07	0.011	0.08	3-7
P264	S4750208-4750210XX	S475MNH0208XX	S475MNH0210XX	10	10	198.1	0.85	0.008	0.05	0.013	0.07	0.017	0.08	3-5
P273	S4740201-4730204XX	S474MNH0201XX	S473MNH0204XX	10	10	341.1	1.03	0.005	0.04	0.005	0.05	0.014	0.08	3-6
P279	S4340209-4340214XX	S434MNH0209XX	S434MNH0214XX	15	15	297.6	0.93	0.005	0.05	0.011	0.06	0.016	0.07	3-3
P263	S4740207-4750208XX	S474MNH0207XX	S475MNH0208XX	10	10	244.6	0.82	0.002	0.04	0.005	0.06	0.008	0.07	3-5
P72	S6100209-6100210XX	S610MNH0209XX	S610MNH0210XX	18	18	384.0	0.20	0.004	0.03	0.004	0.03	0.014	0.06	3-9
P272	S4740213-4740201XX	S474MNH0213XX	S474MNH0201XX	10	10	342.8	1.07	0.000	0.03	0.001	0.03	0.006	0.06	3-6
P290	S5280207-5280206XX	S528MNH0207XX	S528MNH0206XX	12	12	21.0	0.50	0.000	0.01	0.001	0.02	0.002	0.03	3-7
P71	S6100205-6100209XX	S610MNH0205XX	S610MNH0209XX	18	18	384.8	0.22	0.000	0.01	0.000	0.01	0.000	0.02	3-9
P277	S4731001-4730203XX	S473PLG1001XX	S473MNH0203XX	10	10	15.0	0.48	0.000	0.01	0.000	0.01	0.000	0.02	3-6
P289	S5131001-5280207XX	S513PLG1001XX	S528MNH0207XX	12	12	200.0	0.50	0.000	0.01	0.001	0.02	0.001	0.02	3-7
P119	S4480204-4480205XX	S448MNH0204XX	S448MNH0205XX	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipeline was analyzed with WWMP CIP diameter.
2. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P164	S4500212-4500211XX	16	16	27	20.8	1.59	3.826	1.00	1.857	1.00	1.860	1.00	1.859	0.70	3-11
P165	S4500211-4500210XX	16	16	27	31.3	1.18	3.825	1.00	1.858	1.00	1.860	1.00	1.860	0.69	3-11
P50	S5290207-5290208XX	12	12	15	333.0	0.26	1.146	1.00	1.216	0.88	1.696	1.00	1.721	0.70	3-8
P49	S5290206-5290207XX	12	12	15	216.6	0.31	1.132	1.00	1.202	0.81	1.684	1.00	1.709	0.66	3-8
P183	S5130210-5130212XX	10	10	15	263.4	0.84	0.453	0.70	0.486	0.71	0.639	1.00	0.640	0.49	3-7
P110	S5290204-5290202XX	12	12	15	40.0	0.25	0.542	1.00	0.567	0.78	0.661	1.00	0.893	0.64	3-7
P47	S5290202-5290213XX	12	12	15	319.8	0.27	1.121	1.00	1.165	0.76	1.662	1.00	1.675	0.63	3-7
P48	S5290213-5290206XX	12	12	15	20.4	0.54	1.128	1.00	1.198	0.74	1.681	1.00	1.705	0.62	3-8
P41	S5130212-5130208XX	12	12	15	244.6	0.20	1.049	0.65	1.115	0.68	1.619	1.00	1.635	0.57	3-7
P46	S5290202-5290203XX	15	15	18	32.0	0.13	0.564	0.98	0.593	0.67	1.068	1.00	0.778	0.58	3-7
P109	S5120206-5290204XX	12	12	15	280.0	0.25	0.535	0.77	0.566	0.62	0.655	1.00	0.893	0.54	3-7
P108	S5120211-5120206XX	12	12	15	90.0	0.26	0.530	0.50	0.561	0.49	0.650	1.00	0.890	0.46	3-7
P45	S5120207-5290203XX	15	15	18	297.0	0.36	0.549	0.65	0.586	0.51	1.061	1.00	0.773	0.45	3-7
P107	S5130208-5120211XX	12	12	15	158.3	0.29	0.529	0.46	0.560	0.48	0.671	1.00	0.888	0.45	3-7
P43	S5120209-5120210XX	15	15	15	143.0	0.29	0.527	0.39	0.563	0.40	1.039	1.00	0.752	0.44	3-7
P44	S5120210-5120207XX	15	15	18	74.0	0.00	0.542	0.38	0.580	0.40	1.057	1.00	0.769	0.35	3-7
P182	S5130209-5130210XX	12	12	12	63.2	0.41	0.450	0.36	0.483	0.37	0.637	1.00	0.638	0.39	3-7
P42	S5130208-5120209XX	15	15	15	32.0	0.13	0.523	0.35	0.559	0.36	1.037	1.00	0.749	0.42	3-7
P51	S5290208-5520204XX	12	12	15	361.0	0.25	1.171	1.00	1.222	0.80	1.700	0.98	1.725	0.66	3-8
P98	S6500206-6500209XX	18	18	21	468.0	0.16	2.126	0.66	2.534	0.76	3.017	0.95	3.041	0.64	3-10
P97	S6500207-6500206XX	18	18	21	67.3	0.28	2.113	0.63	2.522	0.73	3.005	0.94	3.028	0.61	3-10
P150	S5310212-5500209XX	27	27	33	355.6	0.24	11.993	0.94	11.912	0.93	12.160	0.94	12.158	0.67	3-12
P138	S4710213-4900224XX	27	27	30	1086.8	0.24	11.231	0.94	11.087	0.93	11.277	0.94	11.276	0.72	3-11
P86	S6520205-6520204XX	33	33	42	10.0	0.10	18.232	0.89	18.630	0.91	19.241	0.92	19.479	0.72	3-10
P99	S6500209-6510201XX	18	18	21	468.0	0.16	2.138	0.68	2.546	0.77	3.029	0.92	3.053	0.71	3-10



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P52	S5520204-5520203XX	12	12	15	105.0	0.40	1.136	1.00	1.224	0.70	1.701	0.92	1.726	0.65	3-8
P85	S6520225-6520205XX	33	33	42	20.7	0.53	17.532	0.89	18.479	0.90	19.093	0.91	19.288	0.70	3-10
P144	S5110229-5110211XX	27	27	30	206.5	0.58	11.754	0.86	11.656	0.86	11.903	0.88	11.939	0.69	3-12
P106	S6520208-6520225XX	33	33	39	41.2	0.46	3.547	0.83	4.140	0.85	4.709	0.87	4.644	0.71	3-10
P242	S3920207-3920206XX	8	8	12	47.5	1.05	0.678	0.63	1.060	0.86	1.068	0.86	1.068	0.48	3-1
P151	S5500209-5500207XX	27	27	33	31.8	0.03	11.995	0.84	11.914	0.84	12.162	0.85	12.161	0.68	3-12
P149	S5300202-5310212XX	27	27	30	355.6	0.56	11.983	0.84	11.902	0.84	12.149	0.84	12.148	0.64	3-12
P181	S5130214-5130209XX	12	12	12	246.4	0.51	0.449	0.37	0.482	0.38	0.628	0.84	0.629	0.43	3-7
P145	S5110211-5110209XX	27	27	30	295.3	0.13	11.767	0.83	11.672	0.83	11.918	0.84	11.917	0.71	3-12
P67	S6090201-6090205XX	12	15	18	278.0	0.25	1.365	1.00	1.628	0.67	2.111	0.83	2.134	0.60	3-9
P68	S6090205-6090202XX	12	15	18	95.0	0.25	1.392	1.00	1.665	0.67	2.149	0.83	2.171	0.66	3-9
P66	S5920208-6090201XX	12	15	18	373.0	0.25	1.361	1.00	1.625	0.66	2.108	0.83	2.131	0.57	3-9
P105	S6510210-6520208XX	33	33	36	220.0	0.03	3.379	0.79	3.909	0.81	4.471	0.83	4.411	0.73	3-10
P65	S5920209-5920208XX	12	15	18	155.0	0.25	1.355	1.00	1.621	0.66	2.104	0.82	2.127	0.57	3-9
P64	S5920206-5920209XX	12	15	18	218.0	0.25	1.330	1.00	1.584	0.66	2.066	0.82	2.090	0.57	3-9
P139	S4900224-4900207XX	27	27	30	258.7	0.24	11.367	0.81	11.244	0.81	11.404	0.82	11.387	0.69	3-11
P63	S5920210-5920206XX	12	15	18	258.0	0.25	1.327	1.00	1.582	0.65	2.064	0.82	2.087	0.57	3-9
P241	S3920208-3920207XX	10	10	12	215.1	1.12	0.678	0.52	1.059	0.81	1.067	0.81	1.067	0.47	3-1
P62	S5920207-5920210XX	12	15	18	115.0	0.25	1.324	1.00	1.579	0.65	2.061	0.81	2.084	0.57	3-9
P163	S4320227-4500212XX	16	16	18	552.4	0.30	3.804	1.00	1.855	0.80	1.858	0.80	1.858	0.72	3-11
P104	S6510208-6510210XX	33	33	36	110.0	0.10	3.355	0.76	3.878	0.79	4.439	0.80	4.412	0.71	3-10
P96	S6310208-6500207XX	18	18	18	497.0	0.29	2.111	0.57	2.520	0.65	3.005	0.80	3.027	0.69	3-10
P61	S5690207-5920207XX	12	15	18	180.0	0.25	1.279	1.00	1.519	0.64	2.001	0.80	2.024	0.56	3-9
P60	S5690201-5690207XX	12	15	18	200.0	0.25	1.278	1.00	1.517	0.63	1.999	0.79	2.022	0.56	3-9
P59	S5690202-5690201XX	12	15	18	200.0	0.25	1.275	1.00	1.515	0.63	1.997	0.78	2.020	0.56	3-9



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P87	S6520214-6520204XX	39	39	42	54.7	0.18	17.575	0.74	18.842	0.78	19.347	0.78	19.454	0.73	3-10
P137	S4500207-4710213XX	27	27	27	1135.1	0.84	11.104	0.78	10.955	0.78	11.145	0.78	11.145	0.69	3-11
P142	S4900219-5110214XX	27	27	27	106.7	0.25	11.755	0.76	11.659	0.75	11.899	0.78	11.912	0.74	3-12
P58	S5690203-5690202XX	12	15	18	244.0	0.26	1.230	1.00	1.455	0.62	1.937	0.77	1.961	0.55	3-9
P143	S5110214-5110229XX	27	27	27	88.6	0.47	11.759	0.72	11.664	0.71	11.903	0.74	12.324	0.65	3-12
P141	S4900201-4900219XX	27	27	27	193.4	0.62	11.716	0.73	11.619	0.73	11.846	0.74	11.826	0.72	3-11
P57	S5690204-5690203XX	12	15	15	331.0	0.23	1.129	1.00	1.295	0.60	1.772	0.74	1.796	0.70	3-8
P69	S6090202-6100203XX	12	15	15	373.0	0.28	1.387	0.86	1.670	0.62	2.153	0.74	2.175	0.74	3-9
P78	S5900217-5900219XX	18	18	18	22.7	4.68	3.098	0.72	3.447	0.73	3.486	0.74	3.483	0.74	3-13
P100	S6510201-6510203XX	18	18	18	468.0	0.17	2.151	0.58	2.557	0.65	3.041	0.73	3.065	0.73	3-10
P22	S4750214-4470211XX	10	10	10	211.6	0.19	0.379	0.60	0.413	0.63	0.502	0.73	0.502	0.73	3-4
P103	S6510211-6510208XX	33	33	33	383.0	0.10	3.326	0.68	3.859	0.71	4.391	0.73	4.351	0.70	3-10
P40	S5130213-5130212XX	12	12	12	353.0	1.30	0.593	0.58	0.627	0.61	0.988	0.71	0.988	0.66	3-7
P140	CDT-51	27	27	27	23.4	0.13	12.553	0.71	12.549	0.70	12.613	0.71	12.664	0.71	3-11
P70	S6100203-6100205XX	12	15	15	56.0	0.80	1.788	0.74	2.142	0.62	2.625	0.70	2.648	0.71	3-9
P56	S5520201-5690204XX	12	15	15	400.0	0.27	1.118	1.00	1.250	0.56	1.723	0.70	1.747	0.72	3-8
P54	S5520210-5520202XX	12	15	15	173.2	0.25	1.133	1.00	1.239	0.56	1.716	0.69	1.741	0.70	3-8
P53	S5520203-5520210XX	12	15	15	204.0	0.25	1.142	1.00	1.236	0.55	1.714	0.69	1.739	0.70	3-8
P95	S6310201-6310208XX	18	18	18	283.9	0.29	2.097	0.54	2.507	0.61	2.991	0.69	3.013	0.69	3-10
P17	S4460201-4460207XX	8	8	8	127.1	0.83	0.339	0.57	0.373	0.61	0.437	0.69	0.437	0.69	3-4
P94	S6310202-6310201XX	18	18	18	121.3	0.31	2.090	0.54	2.499	0.60	2.983	0.68	3.005	0.69	3-10
P55	S5520202-5520201XX	12	15	15	200.0	0.25	1.123	1.00	1.243	0.55	1.718	0.68	1.743	0.69	3-8
P148	S5300219-5300202XX	27	27	27	395.2	0.56	11.816	0.67	11.724	0.67	11.971	0.68	11.970	0.65	3-12
P89	CDT-39	48	48	48	28.6	0.35	46.279	0.64	50.260	0.67	51.154	0.68	51.060	0.68	3-10
P21	S4750216-4750214XX	10	10	10	273.8	0.20	0.376	0.56	0.411	0.59	0.499	0.68	0.499	0.68	3-5



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P147	S5110218-5300219XX	27	27	27	310.5	0.56	11.797	0.67	11.703	0.67	11.950	0.68	11.949	0.68	3-12
P146	S5110209-5110218XX	27	27	27	306.6	0.56	11.781	0.67	11.686	0.67	11.934	0.68	11.932	0.68	3-12
P90	S6290216-6290218XX	33	33	33	36.4	0.93	9.340	0.65	9.545	0.66	9.611	0.66	9.603	0.66	3-10
P93	S6310203-6310202XX	18	18	18	178.7	0.28	1.818	0.52	2.172	0.58	2.656	0.66	2.678	0.66	3-9
P20	S4750205-4750216XX	10	10	10	269.5	0.20	0.369	0.55	0.404	0.58	0.482	0.66	0.482	0.66	3-5
P102	S6510205-6510211XX	33	33	33	132.0	0.09	3.422	0.60	4.015	0.63	4.621	0.65	4.594	0.63	3-10
P19	S4750206-4750205XX	8	8	8	132.7	1.34	0.343	0.55	0.377	0.59	0.441	0.65	0.441	0.65	3-5
P18	S4460207-4750206XX	8	8	8	203.1	0.37	0.341	0.54	0.376	0.58	0.439	0.65	0.439	0.65	3-4
P247	S4090220-4100208XX	12	12	12	388.3	0.49	0.802	0.50	1.191	0.64	1.198	0.64	1.198	0.64	3-2
P197	S4330204-4330224XX	21	21	21	313.5	0.87	5.100	0.56	6.162	0.63	6.267	0.64	6.267	0.64	3-2
P92	S6100205-6310203XX	18	18	18	493.5	0.29	1.813	0.50	2.167	0.56	2.650	0.64	2.673	0.64	3-9
P152	S5500207-5500223XX	33	33	33	239.6	0.17	12.015	0.63	11.936	0.63	12.183	0.63	12.181	0.63	3-12
P91	S6290218-6290217XX	33	33	33	91.0	0.35	8.469	0.62	8.756	0.63	8.852	0.63	8.848	0.63	3-10
P231	S3680212-3930211XX	15	15	15	364.7	0.60	1.558	0.44	2.747	0.63	2.770	0.63	2.770	0.63	3-1
P240	S3690219-3920208XX	10	10	10	325.6	1.11	0.674	0.47	1.055	0.62	1.064	0.63	1.064	0.60	3-1
P239	S3690209-3690219XX	10	10	10	141.2	1.07	0.652	0.47	1.032	0.62	1.042	0.62	1.042	0.63	3-1
P11	S4350218-4350220XX	8	8	8	233.7	0.41	0.250	0.51	0.276	0.55	0.339	0.62	0.339	0.62	3-4
P12	S4350220-4460205XX	8	8	8	137.9	0.36	0.251	0.51	0.278	0.54	0.340	0.61	0.340	0.61	3-4
P248	S4100208-4310207XX	12	12	12	359.8	0.51	0.811	0.49	1.201	0.61	1.207	0.61	1.207	0.61	3-2
P88	S6520212-6520214XX	48	48	48	51.1	0.37	41.771	0.56	44.951	0.59	45.753	0.60	45.936	0.60	3-10
P250	S4320232-4320227XX	16	16	16	304.0	0.33	2.898	1.00	1.838	0.60	1.841	0.60	1.841	0.58	3-2
P224	S4080205-4080206XX	21	21	21	69.0	0.75	4.740	0.52	5.789	0.59	5.813	0.60	5.813	0.60	3-1
P101	S6510203-6510205XX	36	36	36	477.5	0.05	3.506	0.53	4.046	0.57	4.548	0.59	4.553	0.57	3-10
P288	S5280205-5290213XX	12	12	12	325.0	0.50	0.032	0.09	0.033	0.10	0.048	0.59	0.034	0.10	3-7
P135	S4310214-4500210XX	27	27	27	278.2	0.52	7.518	0.56	8.846	0.58	8.988	0.59	8.988	0.59	3-11



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P249	S4320232-4310207XX	14	14	14	227.5	0.10	2.923	1.00	1.819	0.58	1.822	0.58	1.822	0.58	3-2
P136	S4500210-4500207XX	27	27	27	187.5	0.64	10.872	0.58	10.711	0.58	10.854	0.58	10.854	0.58	3-11
P225	S4080206-4080209XX	21	21	21	290.8	0.73	4.752	0.51	5.801	0.58	5.825	0.58	5.825	0.58	3-1
P218	S3930207-3930209XX	21	21	21	283.9	0.31	3.562	0.54	3.787	0.58	3.788	0.58	3.788	0.58	3-1
P26	S4470208-4470210XX	10	10	10	370.0	0.20	0.237	0.46	0.254	0.48	0.353	0.58	0.353	0.58	3-5
P219	S3930209-3930212XX	21	21	21	311.0	0.82	4.640	0.51	5.682	0.58	5.699	0.58	5.699	0.58	3-1
P229	S4330208-4330204XX	21	21	21	309.1	0.87	4.804	0.51	5.854	0.57	5.879	0.58	5.879	0.58	3-2
P234	S3930226-3930227XX	14	14	14	329.4	0.16	0.515	0.42	0.887	0.57	0.894	0.58	0.894	0.58	3-1
P134	S4320228-4310214XX	27	27	27	300.7	0.50	7.504	0.52	8.831	0.57	8.973	0.58	8.973	0.58	3-11
P233	S3930211-3930226XX	14	14	14	242.7	0.17	0.499	0.42	0.870	0.57	0.877	0.58	0.877	0.58	3-1
P23	S4470211-4470201XX	10	10	10	381.0	0.21	0.385	0.47	0.420	0.50	0.510	0.58	0.510	0.58	3-4
P220	S3930212-3930213XX	21	21	21	293.7	0.71	4.652	0.51	5.695	0.57	5.712	0.57	5.712	0.57	3-1
P133	S4320235-4320228XX	27	27	27	268.0	0.55	7.918	0.52	8.814	0.56	8.956	0.57	8.956	0.57	3-2
P246	S4090221-4090220XX	12	12	12	258.4	1.08	0.793	0.45	1.182	0.57	1.190	0.57	1.190	0.57	3-1
P128	S4320204-4320205XX	27	27	27	32.6	0.31	5.189	0.50	6.247	0.56	6.441	0.57	6.441	0.57	3-2
P228	S4330210-4330208XX	21	21	21	310.5	0.87	4.791	0.50	5.841	0.57	5.865	0.57	5.865	0.57	3-2
P226	S4080209-4080231XX	21	21	21	314.0	0.86	4.765	0.50	5.814	0.56	5.839	0.57	5.839	0.57	3-1
P227	S4080231-4330210XX	21	21	21	320.0	0.88	4.778	0.50	5.828	0.56	5.852	0.57	5.852	0.57	3-2
P16	S4460202-4460201XX	8	8	8	84.8	0.83	0.338	0.49	0.372	0.51	0.435	0.57	0.435	0.57	3-4
P15	S4460203-4460202XX	8	8	8	166.9	0.58	0.272	0.48	0.301	0.51	0.363	0.56	0.363	0.56	3-4
P130	S4320213-4320220XX	27	27	27	305.2	0.40	5.337	0.50	6.413	0.55	6.606	0.56	6.606	0.56	3-2
P127	S4320202-4320204XX	27	27	27	206.1	0.29	5.177	0.49	6.240	0.55	6.434	0.56	6.434	0.56	3-2
P84	S6290217-6520225XX	42	42	42	517.4	0.47	14.253	0.53	14.847	0.55	15.089	0.55	15.095	0.54	3-10
P180	S5130207-5130214XX	12	12	12	254.0	0.50	0.440	0.36	0.473	0.37	0.615	0.55	0.615	0.43	3-7
P237	S3690201-3690218XX	14	14	14	60.5	0.26	0.606	0.42	0.984	0.55	0.992	0.55	0.992	0.55	3-1



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P131	S4320220-4320230XX	27	27	27	248.8	0.20	5.350	0.49	6.426	0.54	6.620	0.55	6.620	0.55	3-2
P235	S3930227-3690214XX	14	14	14	277.8	0.18	0.527	0.41	0.900	0.55	0.908	0.55	0.908	0.55	3-1
P126	S4330224-4320202XX	27	27	27	299.8	0.32	5.167	0.48	6.229	0.54	6.423	0.55	6.423	0.55	3-2
P83	S6290216-6290217XX	33	33	33	127.1	0.02	6.500	0.53	6.802	0.54	6.919	0.54	6.920	0.55	3-10
P129	S4320205-4320213XX	27	27	27	290.4	0.28	5.320	0.48	6.396	0.53	6.590	0.54	6.590	0.54	3-2
P244	S3920205-3920204XX	10	10	10	34.4	4.08	0.754	0.43	1.143	0.54	1.151	0.54	1.151	0.54	3-1
P132	S4320230-4320235XX	27	27	27	12.4	0.81	4.390	0.50	5.156	0.53	5.298	0.54	5.298	0.54	3-2
P10	S4350201-4350218XX	8	8	8	17.8	1.12	0.247	0.45	0.274	0.47	0.336	0.54	0.336	0.54	3-4
P236	S3690214-3690201XX	14	14	14	323.4	0.26	0.582	0.40	0.958	0.53	0.966	0.53	0.966	0.53	3-1
P232	S3930211-3930209XX	15	15	15	54.6	0.68	1.065	0.38	1.883	0.53	1.899	0.53	1.899	0.53	3-1
P217	S3940204-3930207XX	21	21	21	274.5	0.72	3.551	0.51	3.775	0.53	3.776	0.53	3.776	0.53	3-1
P27	S4470210-4480204XX	10	10	10	386.3	0.18	0.244	0.42	0.261	0.43	0.368	0.53	0.368	0.53	3-15
P13	S4460205-4460204XX	8	8	8	69.1	0.43	0.265	0.45	0.293	0.47	0.355	0.53	0.355	0.53	3-4
P245	S3920204-4090221XX	12	12	12	648.5	0.88	0.786	0.41	1.174	0.51	1.182	0.52	1.182	0.52	3-1
P25	S4470207-4470208XX	10	10	10	100.0	0.20	0.228	0.42	0.244	0.44	0.314	0.52	0.314	0.52	3-4
P118	S4880209-4880210XX	12	12	12	353.5	0.16	0.350	0.41	0.373	0.43	0.497	0.51	0.497	0.51	3-6
P14	S4460204-4460203XX	8	8	8	321.8	1.12	0.268	0.43	0.296	0.46	0.358	0.51	0.358	0.51	3-4
P251	S3920206-3920205XX	10	10	10	208.0	0.43	0.375	0.40	0.566	0.51	0.571	0.51	0.571	0.51	3-1
P243	CDT-81	10	10	10	204.0	0.44	0.378	0.40	0.574	0.51	0.579	0.51	0.579	0.51	3-1
P238	S3690209-3690218XX	14	14	14	329.4	0.26	0.612	0.38	0.990	0.50	0.999	0.50	0.999	0.50	3-1
P38	S4880211-4880210XX	10	10	10	30.0	0.83	0.205	0.36	0.217	0.37	0.435	0.50	0.435	0.50	3-6
P155	S5500201-5500225XX	42	42	42	15.0	0.07	12.184	0.49	12.131	0.49	12.379	0.50	12.375	0.50	3-12
P221	S3930213-3930214XX	21	21	21	44.7	0.90	4.662	0.43	5.705	0.49	5.729	0.49	5.729	0.49	3-1
P223	CDT-83	24	24	24	237.8	0.22	2.355	0.43	2.877	0.48	2.889	0.49	2.889	0.49	3-1
P230	S3930216-4080205XX	24	24	24	232.5	0.23	2.382	0.43	2.909	0.48	2.921	0.49	2.921	0.49	3-1



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P156	S5500225-5710212XX	42	42	42	286.5	0.14	12.205	0.48	12.154	0.48	12.402	0.48	12.398	0.48	3-13
P117	S4880208-4880209XX	10	10	10	30.0	0.83	0.187	0.40	0.198	0.41	0.262	0.47	0.262	0.47	3-6
P216	S3940201-3940204XX	21	21	21	49.8	0.60	3.538	0.46	3.762	0.47	3.764	0.47	3.764	0.47	3-1
P262	S4750204-4750205XX	10	10	10	137.7	0.22	0.027	0.37	0.029	0.40	0.039	0.47	0.039	0.47	3-5
P222	S3930214-3930216XX	21	21	21	83.1	2.32	4.718	0.42	5.767	0.47	5.791	0.47	5.791	0.47	3-1
P39	S4880210-5130213XX	12	12	12	361.0	0.70	0.561	0.35	0.595	0.36	0.933	0.46	0.933	0.46	3-6
P28	S4480204-4480203XX	10	10	10	234.0	0.48	0.247	0.37	0.264	0.38	0.370	0.46	0.370	0.46	3-15
P161	S5900216-5900217XX	42	42	42	600.9	0.28	12.966	0.45	13.208	0.45	13.457	0.46	13.453	0.46	3-13
P80	S6110209-6110210XX	42	42	42	412.2	0.34	13.701	0.44	14.148	0.45	14.400	0.46	14.402	0.46	3-13
P81	S6110210-6300209XX	42	42	42	620.0	0.23	13.906	0.44	14.433	0.45	14.678	0.46	14.683	0.46	3-13
P79	S5900217-6110209XX	42	42	42	380.0	0.23	13.855	0.44	14.323	0.45	14.585	0.45	14.586	0.45	3-13
P174	S4870204-4880202XX	12	12	12	471.4	0.51	0.475	0.37	0.509	0.38	0.689	0.45	0.689	0.45	3-7
P157	S5710212-5710211XX	42	42	42	362.0	0.18	12.327	0.44	12.315	0.44	12.563	0.44	12.558	0.44	3-13
P179	S5130206-5130207XX	12	12	12	320.6	0.39	0.438	0.37	0.470	0.38	0.608	0.44	0.608	0.44	3-7
P184	S4880201-4880209XX	12	12	12	452.8	0.13	0.159	0.37	0.170	0.39	0.225	0.44	0.225	0.44	3-6
P29	S4480203-4480202XX	10	10	10	243.0	0.34	0.255	0.36	0.272	0.37	0.378	0.44	0.378	0.44	3-15
P82	S6300209-6290216XX	42	42	42	444.2	0.36	13.935	0.43	14.464	0.44	14.708	0.44	14.713	0.44	3-14
P24	S4470201-4470207XX	10	10	10	319.1	0.18	0.126	0.36	0.137	0.38	0.184	0.44	0.184	0.44	3-4
P160	S5900215-5900216XX	42	42	42	130.0	0.26	12.685	0.43	12.817	0.43	13.066	0.44	13.058	0.44	3-13
P178	S4880205-5130206XX	12	12	12	296.4	0.43	0.367	0.36	0.391	0.37	0.519	0.43	0.519	0.43	3-7
P159	S5710216-5900215XX	42	42	42	581.9	0.28	12.542	0.42	12.620	0.42	12.868	0.43	12.860	0.43	3-13
P158	S5710211-5710216XX	42	42	42	364.9	0.28	12.374	0.42	12.375	0.42	12.624	0.42	12.618	0.42	3-13
P173	S4870203-4870204XX	12	12	12	274.6	0.83	0.460	0.34	0.493	0.36	0.662	0.42	0.662	0.42	3-7
P154	S5500202-5500201XX	33	33	33	50.0	17.13	12.036	0.41	11.959	0.41	12.207	0.42	12.204	0.42	3-12
P196	S4330203-4330204XX	18	18	18	78.0	1.58	0.283	0.37	0.295	0.40	0.377	0.42	0.377	0.42	3-2



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P175	S4880202-4880201XX	12	12	12	117.9	0.51	0.477	0.34	0.510	0.35	0.691	0.41	0.691	0.41	3-7
P153	S5500223-5500202XX	33	33	33	301.8	0.12	12.033	0.39	11.956	0.39	12.204	0.40	12.200	0.40	3-12
P30	S4480202-4730209XX	10	10	10	273.6	0.69	0.261	0.32	0.278	0.33	0.383	0.39	0.383	0.39	3-6
P169	S4740204-4740211XX	12	12	12	206.5	1.19	0.434	0.32	0.466	0.34	0.609	0.39	0.609	0.39	3-5
P170	S4740211-4870201XX	12	12	12	211.8	0.49	0.442	0.32	0.474	0.34	0.625	0.39	0.625	0.39	3-5
P77	S6110203-5900219XX	18	18	18	357.0	0.23	0.496	0.34	0.666	0.38	0.666	0.38	0.666	0.39	3-13
P172	S4870202-4870203XX	12	12	12	256.9	1.27	0.453	0.30	0.487	0.31	0.656	0.36	0.656	0.36	3-6
P177	S4880204-4880205XX	12	12	12	56.6	1.15	0.362	0.30	0.386	0.31	0.512	0.36	0.512	0.36	3-7
P171	S4870201-4870202XX	12	12	12	257.5	1.27	0.446	0.28	0.479	0.29	0.629	0.34	0.629	0.34	3-5
P215	S4470206-4470207XX	10	10	10	269.7	1.90	0.102	0.28	0.108	0.30	0.129	0.34	0.129	0.34	3-4
P176	S4880201-4880204XX	12	12	12	18.5	0.65	0.361	0.28	0.385	0.29	0.511	0.33	0.511	0.33	3-7
P35	S4880214-4880213XX	10	10	10	351.0	0.70	0.157	0.26	0.166	0.26	0.259	0.33	0.259	0.33	3-6
P168	S4740212-4740204XX	12	12	12	295.0	1.18	0.356	0.27	0.387	0.28	0.529	0.32	0.529	0.32	3-5
P36	S4880213-4880212XX	10	10	10	287.0	0.69	0.176	0.25	0.187	0.26	0.292	0.32	0.292	0.32	3-6
P166	S4470201-4740205XX	12	12	12	307.6	1.00	0.340	0.26	0.370	0.27	0.503	0.31	0.503	0.31	3-4
P167	S4740205-4740212XX	12	12	12	297.5	1.18	0.348	0.25	0.377	0.26	0.512	0.31	0.512	0.31	3-5
P114	S4880206-4880216XX	10	10	10	14.8	0.67	0.172	0.26	0.183	0.27	0.241	0.31	0.241	0.31	3-6
P34	S4730207-4880214XX	10	10	10	364.6	0.68	0.149	0.24	0.158	0.25	0.224	0.31	0.224	0.31	3-6
P116	S4880207-4880208XX	10	10	10	313.6	0.90	0.186	0.25	0.197	0.26	0.255	0.30	0.255	0.30	3-6
P203	S4340204-4340205XX	12	12	12	303.6	0.14	0.140	0.28	0.149	0.29	0.155	0.30	0.155	0.30	3-3
P111	S4730209-4730205XX	10	10	10	352.4	0.51	0.153	0.25	0.163	0.26	0.221	0.30	0.221	0.30	3-6
P33	S4730208-4730207XX	10	10	10	353.9	0.61	0.140	0.24	0.149	0.25	0.216	0.30	0.216	0.30	3-6
P200	S4070202-4070201XX	10	10	10	57.5	0.30	0.124	0.28	0.133	0.29	0.136	0.30	0.136	0.30	3-3
P113	S4730206-4880206XX	10	10	10	347.0	0.89	0.171	0.25	0.182	0.26	0.239	0.30	0.239	0.30	3-6
P31	S4730209-4480209XX	10	10	10	393.3	0.35	0.122	0.25	0.130	0.25	0.177	0.30	0.177	0.30	3-6



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P37	S4880212-4880211XX	10	10	10	46.4	1.21	0.176	0.23	0.188	0.23	0.293	0.29	0.293	0.29	3-6
P115	S4880216-4880207XX	10	10	10	353.6	0.91	0.179	0.25	0.190	0.26	0.248	0.29	0.248	0.29	3-6
P76	S6110202-6110203XX	18	18	18	323.0	0.18	0.342	0.25	0.469	0.29	0.469	0.29	0.469	0.29	3-13
P296	S4350215-4350201XX	8	8	8	68.7	8.08	0.046	0.25	0.050	0.26	0.058	0.29	0.058	0.29	3-4
P122	S4480219-4330229XX	10	10	10	266.9	0.27	0.041	0.16	0.042	0.16	0.135	0.28	0.135	0.28	3-2
P199	S4070203-4070202XX	10	10	10	80.0	0.30	0.123	0.27	0.132	0.28	0.136	0.28	0.136	0.28	3-3
P32	S4480209-4730208XX	10	10	10	342.9	0.72	0.133	0.23	0.141	0.24	0.187	0.28	0.187	0.28	3-6
P198	S4060210-4070203XX	10	10	10	266.0	0.30	0.122	0.27	0.131	0.28	0.135	0.28	0.135	0.28	3-3
P112	S4730205-4730206XX	10	10	10	352.0	0.94	0.159	0.24	0.169	0.24	0.227	0.28	0.227	0.28	3-6
P9	S4350202-4350201XX	10	10	10	14.0	1.43	0.038	0.21	0.039	0.22	0.117	0.28	0.117	0.28	3-4
P212	S4330207-4330206XX	15	15	15	20.0	0.10	0.126	0.24	0.131	0.24	0.173	0.28	0.173	0.28	3-2
P124	S4330212-4330230XX	10	10	10	50.0	0.40	0.046	0.16	0.048	0.16	0.143	0.28	0.143	0.28	3-2
P123	S4330229-4330212XX	10	10	10	180.0	0.40	0.046	0.15	0.047	0.16	0.142	0.27	0.142	0.27	3-2
P258	S4470202-4470201XX	12	12	12	130.0	0.50	0.073	0.20	0.078	0.21	0.174	0.27	0.174	0.27	3-4
P204	S4340205-4340214XX	10	10	10	308.0	0.19	0.150	0.25	0.159	0.26	0.173	0.27	0.173	0.27	3-3
P201	S4070201-4340203XX	10	10	10	327.6	0.30	0.129	0.26	0.138	0.26	0.141	0.27	0.141	0.27	3-3
P75	S6110201-6110202XX	18	18	18	65.0	0.23	0.334	0.22	0.460	0.26	0.460	0.26	0.460	0.26	3-13
P125	S4330230-4330224XX	10	10	10	100.0	0.39	0.050	0.15	0.052	0.16	0.146	0.26	0.146	0.26	3-2
P74	S6100207-6110201XX	18	18	18	388.0	0.20	0.331	0.22	0.458	0.26	0.458	0.26	0.458	0.26	3-9
P7	S4350214-4350206XX	10	10	10	185.0	0.35	0.036	0.15	0.037	0.15	0.115	0.26	0.115	0.26	3-4
P268	S4740203-4740204XX	12	12	12	280.3	0.19	0.076	0.23	0.079	0.24	0.069	0.26	0.069	0.26	3-5
P121	S4480208-4480219XX	10	10	10	297.0	0.29	0.035	0.16	0.036	0.16	0.067	0.25	0.067	0.25	3-2
P3	S4340201-4350211XX	10	10	10	300.0	0.03	0.019	0.16	0.020	0.16	0.050	0.25	0.050	0.25	3-3
P2	S4350219-4340201XX	10	10	10	395.0	0.33	0.015	0.15	0.016	0.16	0.040	0.24	0.040	0.24	3-3
P202	S4340203-4340204XX	12	12	12	315.3	0.71	0.134	0.23	0.143	0.23	0.146	0.24	0.146	0.24	3-3



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P194	S4330225-4330206XX	15	15	15	100.0	0.46	0.153	0.20	0.159	0.20	0.199	0.23	0.199	0.23	3-2
P6	S4350213-4350214XX	10	10	10	79.0	0.43	0.033	0.14	0.034	0.14	0.087	0.23	0.087	0.23	3-4
P195	S4330206-4330203XX	15	15	15	185.7	0.31	0.281	0.20	0.293	0.20	0.375	0.23	0.375	0.23	3-2
P211	S4330213-4330207XX	15	15	15	335.0	0.36	0.124	0.19	0.130	0.20	0.171	0.22	0.171	0.22	3-2
P8	S4350206-4350202XX	10	10	10	129.0	0.30	0.038	0.13	0.039	0.13	0.116	0.22	0.116	0.22	3-4
P257	S4470209-4470202XX	12	12	12	103.0	0.51	0.071	0.14	0.075	0.15	0.172	0.22	0.172	0.22	3-4
P261	S4750203-4750204XX	10	10	10	250.5	0.16	0.017	0.15	0.018	0.17	0.026	0.22	0.026	0.22	3-5
P5	S4350212-4350213XX	10	10	10	300.0	0.33	0.032	0.13	0.033	0.14	0.086	0.22	0.086	0.22	3-3
P256	S4470203-4470209XX	12	12	12	197.0	0.69	0.069	0.14	0.074	0.14	0.171	0.21	0.171	0.21	3-4
P254	S4080202-4080201XX	10	10	10	212.0	0.78	0.024	0.18	0.025	0.18	0.031	0.21	0.031	0.21	3-3
P192	S4080211-4330211XX	15	15	15	270.3	0.39	0.138	0.18	0.144	0.18	0.184	0.21	0.184	0.21	3-2
P193	S4330211-4330225XX	15	15	15	367.6	0.20	0.143	0.18	0.150	0.18	0.189	0.21	0.189	0.21	3-2
P255	S4460210-4470203XX	12	12	12	300.0	0.74	0.066	0.13	0.071	0.13	0.170	0.20	0.170	0.20	3-4
P4	S4350211-4350212XX	10	10	10	302.0	0.60	0.027	0.12	0.028	0.12	0.073	0.20	0.073	0.20	3-3
P253	S4080203-4080202XX	10	10	10	347.4	0.01	0.020	0.18	0.021	0.18	0.026	0.20	0.026	0.20	3-3
P295	S4460209-4460210XX	12	12	12	300.0	0.73	0.053	0.12	0.057	0.12	0.149	0.19	0.149	0.19	3-4
P191	S4080201-4080211XX	15	15	15	396.9	0.25	0.128	0.17	0.134	0.17	0.173	0.19	0.173	0.19	3-2
P120	S4480205-4480208XX	10	10	10	279.0	0.30	0.028	0.14	0.029	0.14	0.052	0.19	0.052	0.19	3-15
P252	S4080204-4080203XX	10	10	10	329.6	0.31	0.012	0.17	0.013	0.17	0.014	0.19	0.014	0.19	3-3
P278	S4730203-4730209XX	10	10	10	214.0	0.94	0.003	0.15	0.003	0.16	0.003	0.18	0.003	0.18	3-6
P214	S4470205-4470206XX	10	10	10	260.4	1.12	0.093	0.16	0.098	0.17	0.108	0.18	0.108	0.18	3-4
P283	S4330227-4480205XX	10	10	10	415.0	0.28	0.024	0.13	0.025	0.13	0.048	0.17	0.048	0.17	3-15
P210	S4330202-4330213XX	15	15	15	170.0	0.35	0.111	0.15	0.116	0.15	0.150	0.17	0.150	0.17	3-2
P294	S4460208-4460209XX	10	10	10	300.0	1.13	0.039	0.12	0.042	0.13	0.048	0.17	0.048	0.17	3-4
P213	S4340214-4470205XX	10	10	10	264.7	2.03	0.089	0.16	0.094	0.16	0.104	0.17	0.104	0.17	3-3



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P206	S4340211-4340207XX	15	15	15	409.3	0.20	0.094	0.15	0.100	0.15	0.124	0.17	0.124	0.17	3-3
P209	S4330226-4330202XX	15	15	15	11.0	0.36	0.107	0.14	0.112	0.15	0.147	0.17	0.147	0.17	3-3
P73	S6100210-6100207XX	18	18	18	388.0	0.20	0.028	0.14	0.028	0.16	0.028	0.16	0.028	0.16	3-9
P267	S4740202-4740203XX	12	12	12	293.9	0.29	0.070	0.17	0.072	0.18	0.061	0.16	0.061	0.16	3-5
P287	S5280204-5280205XX	10	10	10	156.0	0.50	0.022	0.11	0.023	0.11	0.024	0.16	0.024	0.11	3-7
P190	S4080229-4080201XX	15	15	15	75.0	1.04	0.095	0.14	0.100	0.14	0.129	0.16	0.129	0.16	3-3
P188	S4340213-4080230XX	12	12	12	366.0	0.96	0.087	0.14	0.091	0.14	0.119	0.16	0.119	0.16	3-3
P186	S4070204-4070206XX	10	10	10	262.4	0.51	0.020	0.13	0.022	0.13	0.038	0.16	0.038	0.16	3-3
P189	S4080230-4080229XX	12	12	12	280.2	0.96	0.093	0.13	0.098	0.14	0.128	0.16	0.128	0.16	3-3
P208	S4330214-4330226XX	15	15	15	319.5	0.59	0.107	0.13	0.112	0.14	0.146	0.16	0.146	0.16	3-3
P187	S4070206-4340213XX	12	12	12	186.8	0.89	0.080	0.13	0.085	0.14	0.113	0.16	0.113	0.16	3-3
P282	S4330228-4330227XX	10	10	10	36.1	0.44	0.017	0.11	0.018	0.11	0.033	0.15	0.033	0.15	3-3
P205	S4340214-4340211XX	15	15	15	426.4	1.11	0.083	0.13	0.088	0.14	0.098	0.15	0.098	0.15	3-3
P1	S4350210-4350219XX	10	10	10	390.0	0.33	0.009	0.09	0.010	0.09	0.037	0.15	0.037	0.15	3-3
P260	S4760202-4750203XX	10	10	10	350.4	0.14	0.014	0.12	0.014	0.12	0.022	0.14	0.022	0.14	3-5
P207	S4340207-4330214XX	15	15	15	267.8	0.58	0.100	0.12	0.105	0.13	0.130	0.14	0.130	0.14	3-3
P266	S4750209-4740202XX	12	12	12	237.9	0.32	0.061	0.15	0.062	0.16	0.049	0.14	0.049	0.14	3-5
P185	S4070213-4070204XX	10	10	10	278.2	0.20	0.013	0.10	0.014	0.10	0.025	0.13	0.025	0.13	3-3
P281	S4340206-4330228XX	10	10	10	208.5	0.43	0.017	0.09	0.017	0.09	0.032	0.13	0.032	0.13	3-3
P297	S4350215-4350216XX	8	8	8	95.0	3.31	0.029	0.11	0.032	0.12	0.037	0.13	0.037	0.13	3-4
P271	S4750215-4750209XX	10	10	10	40.4	0.79	0.042	0.15	0.042	0.15	0.019	0.12	0.019	0.12	3-5
P293	S4350217-4460208XX	10	10	10	300.0	1.13	0.035	0.11	0.038	0.11	0.044	0.12	0.044	0.12	3-4
P265	S4750210-4750209XX	10	10	10	250.7	1.84	0.017	0.12	0.018	0.12	0.024	0.12	0.024	0.12	3-5
P276	S4880215-4880201XX	10	10	10	338.0	0.77	0.034	0.11	0.035	0.12	0.036	0.12	0.036	0.12	3-6
P292	S4350216-4350217XX	10	10	10	160.0	1.10	0.031	0.10	0.034	0.11	0.040	0.11	0.040	0.11	3-4



Table A-7 Comparison of PWWF Results

Pipe ID ¹	Sewer Main ID	Ex. D(in.)	WWMP CIP D. (in.)	PPSP CIP D. (in.)	Length (ft.)	Slope (%)	2015 PWWF w/o PPSP using Existing Diameter		2035 PWWF w/o PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using WWMP CIP Diameter		2035 PWWF w/ PPSP using PPSP CIP Diameter		Figure
							Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	Max. Flow (mgd)	d/D	
P291	S5280206-5280205XX	12	12	12	240.0	0.50	0.005	0.07	0.005	0.07	0.006	0.11	0.006	0.07	3-7
P280	S4340212-4340206XX	10	10	10	320.3	0.87	0.014	0.08	0.014	0.08	0.025	0.11	0.025	0.11	3-3
P259	S4760201-4760202XX	10	10	10	356.4	0.15	0.005	0.09	0.005	0.09	0.007	0.11	0.007	0.11	3-5
P286	S5280203-5280204XX	10	10	10	185.0	0.42	0.019	0.10	0.020	0.10	0.021	0.10	0.021	0.10	3-7
P275	S4880203-4880215XX	10	10	10	358.2	1.32	0.027	0.10	0.028	0.10	0.028	0.10	0.028	0.10	3-6
P270	S4750217-4750215XX	10	10	10	300.0	0.30	0.012	0.10	0.013	0.11	0.019	0.10	0.019	0.10	3-5
P285	S5280202-5280203XX	10	10	10	195.0	0.50	0.017	0.10	0.018	0.10	0.018	0.10	0.018	0.10	3-7
P269	S4860203-4750217XX	10	10	10	316.3	0.77	0.005	0.07	0.005	0.07	0.009	0.09	0.009	0.09	3-5
P274	S4730204-4880203XX	10	10	10	360.3	1.03	0.019	0.09	0.020	0.09	0.020	0.09	0.020	0.09	3-6
P284	S5280208-5280202XX	10	10	10	254.0	0.56	0.011	0.08	0.012	0.08	0.011	0.08	0.011	0.08	3-7
P264	S4750208-4750210XX	10	10	10	198.1	0.85	0.012	0.07	0.013	0.07	0.017	0.08	0.017	0.08	3-5
P273	S4740201-4730204XX	10	10	10	341.1	1.03	0.013	0.07	0.014	0.08	0.014	0.08	0.014	0.08	3-6
P279	S4340209-4340214XX	15	15	15	297.6	0.93	0.010	0.07	0.010	0.07	0.016	0.07	0.016	0.07	3-3
P263	S4740207-4750208XX	10	10	10	244.6	0.82	0.005	0.06	0.005	0.06	0.008	0.07	0.008	0.07	3-5
P72	S6100209-6100210XX	18	18	18	384.0	0.20	0.014	0.06	0.014	0.06	0.014	0.06	0.014	0.06	3-9
P272	S4740213-4740201XX	10	10	10	342.8	1.07	0.005	0.06	0.005	0.06	0.006	0.06	0.006	0.06	3-6
P290	S5280207-5280206XX	12	12	12	21.0	0.50	0.001	0.03	0.001	0.03	0.002	0.03	0.002	0.03	3-7
P71	S6100205-6100209XX	18	18	18	384.8	0.22	0.000	0.02	0.000	0.02	0.000	0.02	0.000	0.02	3-9
P277	S4731001-4730203XX	10	10	10	15.0	0.48	0.000	0.02	0.000	0.02	0.000	0.02	0.000	0.02	3-6
P289	S5131001-5280207XX	12	12	12	200.0	0.50	0.000	0.01	0.000	0.01	0.001	0.02	0.001	0.02	3-7
P119	S4480204-4480205XX	10	10	10	6.0	1.67	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	3-15

*Pipelines highlighted in red are proposed for upsizing in the WWMP.

1. Pipelines are sorted from the greatest d/D to the smallest d/D under PWWF conditions with existing diameters.