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Proposed Commercial Development
4175 Strandherd Drive
Site Servicing & Stormwater Management Report

Prepared for: Choice Properties

PROPOSED COMMERCIAL DEVELOPMENT

4175 Strandherd Drive

Ottawa, Ontario

Site Servicing & Stormwater Management Report

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
K2M 1P6

Submitted: February 2, 2026

Novatech File: 125050
Ref: R-2026-009

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February 2, 2026

City of Ottawa
Planning Infrastructure and Economic Development Department
110 Laurier Avenue West, 4th Floor
Ottawa, ON
K1P 1J1

Attention: **Kelby Lodoen Unseth**

Reference: **Proposed Commercial Development**
4175 Strandherd Drive
Site Servicing and Stormwater Management Report
Our File No.: 125050

Please find enclosed the 'Site Servicing and Stormwater Management Report' dated February 2, 2026, for the above noted project. This report is prepared in support of the Site Plan Application and is hereby submitted for review and approval.

Should you have any questions or comments, please do not hesitate to contact us.

Yours truly,

NOVATECH

Drew Blair, P.Eng.
Senior Project Manager

cc: Rina Gerson

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Table of Contents

APPENDICES

TABLES

FIGURES

DRAWINGS

1.0 INTRODUCTION

Novatech has been retained to prepare a Site Servicing and Stormwater Management Report for the proposed commercial development located at 4175 Strandherd Drive (Subject Site) within Ottawa, Ontario. This report is submitted in support of a Site Plan Application for the proposed development.

Figure 1 – Key Plan shows the site location with respect to the CitiGate 416 Corporate Campus.

This report outlines the proposed sanitary and storm sewer servicing system, water distribution network, and stormwater management strategy for the proposed development.

1.1 Existing Conditions

The Subject Site's total area is approximately 5.27 hectares in size and is located within the CitiGate 416 Corporate Campus development southeast of the Highway 416 and Strandherd Drive interchange.

Within the CitiGate 416 Corporate Campus development, the Subject Site is located south of the existing Systemhouse Street and Strandherd Drive signalized intersection. The site is bounded by Systemhouse Street to the north, Strandherd Drive to the east, previously developed car dealerships and the Anegawhet Pond to the south, the O'Keefe Drain and undeveloped lands to the west.

Figure 2 – Existing Conditions Plan highlights the site's existing conditions.

It should be noted that the CitiGate 416 Corporate Campus development has been designed, approved, and constructed to provide sanitary, storm and water servicing including stormwater management for the Subject Site.

1.2 Proposed Development

The proposed development consists of ten (10) Commercial Retail Units (CRUs), along with associated truck and trailer parking areas, drive through lanes, patio areas, landscaped areas, and surface parking lots. The proposed CRUs occupy approximately 1.15 hectares of the 5.27-hectare site. Access to the Subject Site will be provided by three (3) entrances: two from Strandherd Drive along the northeast area of the site, and one from Systemhouse Street along the northwest area of the site.

Figure 3 – Concept Plan presents the proposed commercial development.

1.3 Design Criteria and Site Constraints

As discussed previously, the Subject Site is part of the CitiGate 416 Corporate Campus development and is referred to as *'Block 3'*. Design criteria and information for the overall development is provided in the approved report entitled '*Citigate 416 Corporate Campus – Detailed Servicing and Stormwater Management Report (Phase 1)*' prepared by Novatech, dated January 9, 2015.

This site servicing report conforms to the design criteria and site constraints outlined in the CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015) regarding sanitary and storm sewer servicing, stormwater management strategies, and water distribution networks. Design criteria and site constraints for each system are presented in further detail in the corresponding sections of this site servicing and stormwater management report.

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4175 STRANDHERD DRIVE

EXISTING CONDITIONS PLAN

SCALE 1 : 2000 (0, 20, 40, 60, 80)

DATE	JOB	FIGURE
FEB 2026	125050	FIGURE 2

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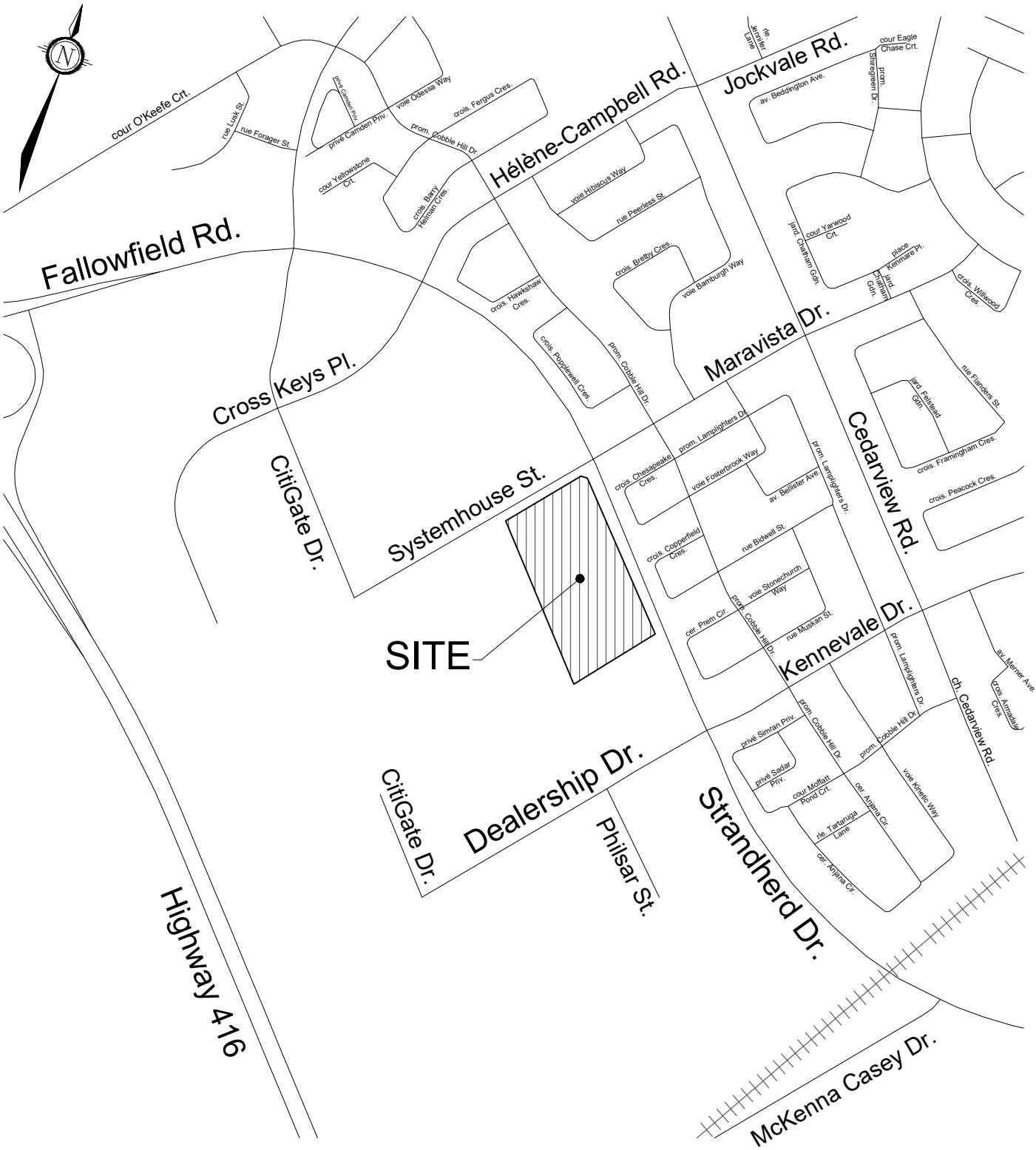

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4175 STRANDHERD DRIVE

KEY PLAN

SCALE		
NOT TO SCALE		
DATE: FEB 2026	JOB: 125050	FIGURE: FIGURE 1

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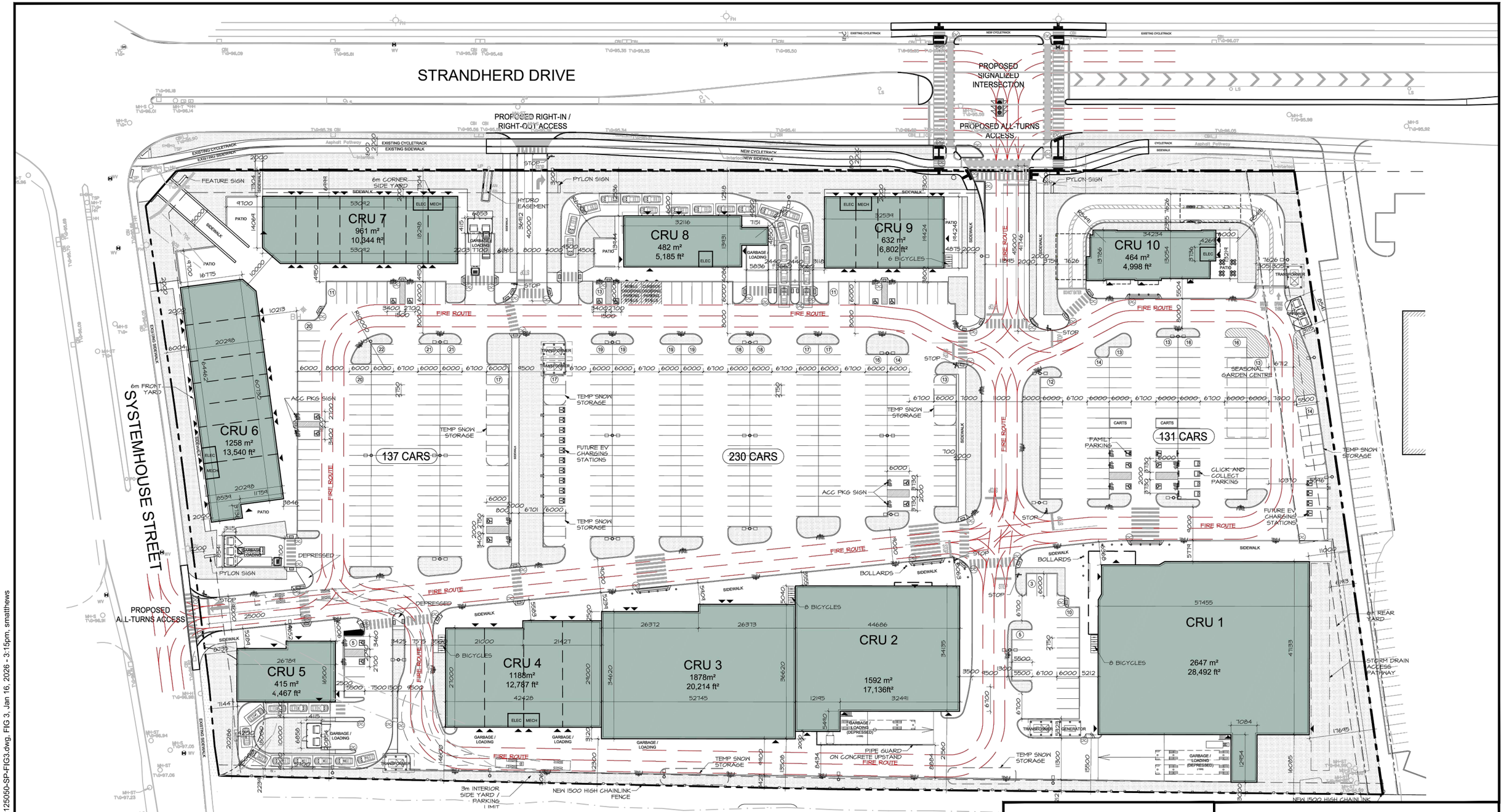

M:\2025\125050\CAD\Civil\Figures\Design Brief\125050-SP-FIG3.dwg, FIG 3, Jan 16, 2026 - 3:15pm, smatthews

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4175 STRANDHERD DRIVE

SITE PLAN

SCALE 1 : 1000 (0, 10, 20, 30, 40)

DATE FEB 2026 | JOB 125050 | FIGURE FIGURE 3

SHT11X17.DWG - 279mmX432mm

1.4 Geotechnical Investigation

The report titled '*Geotechnical Investigation, Proposed Commercial Development, 4175 Strandherd Drive, Ottawa, ON, REPORT PG7725-1'* prepared by Paterson Group dated November 24, 2025, provides geotechnical recommendations for the proposed development. A summary of the investigation's findings are as follows:

- The ground surface across the site is relatively flat, sloping gently from north to south between approximate geodetic elevations of 95.5 to 94.5m.
- Generally, the subsurface profile at the Subject Site consists of a layer of topsoil underlain by a layer of very stiff brown silty clay, followed by a layer of firm to stiff grey silty clay, further underlain by glacial till deposit, and ultimately by the underlying bedrock formation.
- This site consists of a topsoil layer ranging in thickness between 200 to 350mm. The topsoil layer was noted to consist of a blend of brown silty clay with silty sand. Traces of crushed stone were noted within the topsoil layer at several borehole locations throughout the Subject Site.
- Bedrock information was provided based on available geological mapping of the site's location. The bedrock consists of dolostone and sandstone of the March Formation with a drift thickness ranging between 5 to 15m.
- Long-term groundwater levels are estimated to be at depths of 1.24m to 5.29m below existing grade.
- It is anticipated a fill layer will be encountered along the eastern property parcel boundary and at the northwestern portion of the Subject Site at the founding depth of the proposed CRU 7, 8, 9, and CRU 10 buildings. Where fill is encountered, provided the in-situ fill is considered to be of relatively workable soils (i.e., compactable using sheepsfoot and/or smooth-drum rollers), consideration could be given to sub-excavating 400 mm below the design founding depth of the proposed structures foundations, proof-rolling (i.e., re-compacting) and reinstating with engineered fill (OPSS Granular A and/or OPSS Granular A Type II crushed stone) as a capping layer for the bearing surface. All approved fill material should be placed in maximum 300 mm loose lifts under dry conditions and in above freezing temperatures. All sub-excavation and proof-rolling works should be reviewed and approved by Paterson field personnel.
- Due to the presence of silty clay deposit on the Subject Site, a permissible grade raise restriction is recommended in the immediate area of settlement sensitive structures. The current permissible grade raise recommendations are presented on Drawing PG7725-2 Permissible Grade Raise Plan in Appendix 2 of the Geotechnical Investigation report provided by Paterson Group.
- The proposed grading conditions within a portion of the site are above Paterson's permissible grade raise recommendations. Therefore, lightweight fill (LWF) will be required for the proposed buildings and areas surrounding the building footprints where the permissible grade raise restrictions have been exceeded.
    - The LWF within the building footprints should consist of EPS 22 (expanded polystyrene) geofoam blocks.
    - The LWF beyond building footprints should consist of EPS Type 19 and Type 12 geofoam blocks throughout hardscaped and landscaped areas, respectively.
    - The placement of all lightweight fill should be reviewed at the time of placement by Paterson personnel.

1.5 Environmental Site Assessment

The report titled "Phase I Environmental Site Assessment Update – 4175 Strandherd Drive, Ottawa ON" prepared by Paterson Group, dated March 21, 2024 updates the original Phase I ESA entitled "Phase I Environmental Site Assessment, Vacant Land – Strandherd Drive at Highway 416, Ottawa, Ontario," prepared by Paterson, dated June 24, 2015. The report summarizes the updated Phase I ESA findings for the proposed development. A summary of the ESA's findings is as follows:

- A review of more recent environmental records, in conjunction with a visual inspection of the property, indicated that no physical changes have been made to the Phase I Property since the time of the previous 2015 Phase I ESA.
- The initially assessed lands had been previously utilized for agricultural purposes, and no evidence of any alternative uses, or formal development of lands were identified.
- Following a visual inspection, no environmental concerns were noted regarding the subject lands.
- Paterson completed various Phase 1 ESA's within the area of the subject lands. A review of those reports did not identify any environmental risks to the subject lands.
- Based on Paterson's finding of their environmental assessment, it is their opinion that a Phase ll – Environmental Site Assessment is not required for the Subject Site.

1.6 Consultations and Approvals

The proposed site plan was presented at a pre-consultation meeting with the City of Ottawa on July 14, 2025. Notes from the meeting were received and incorporated into the site plan submission.

As part of the site plan approval process, the Rideau Valley Conservation Authority (RVCA) will be included in the circulation by the City of Ottawa for review and comments. Clearance from the RVCA will be required as part of the site plan approval process.

As determined in the pre-consultation meeting with the City of Ottawa, an Environmental Compliance Approval (ECA) provided by the Ministry of the Environment, Conservation and Parks (MECP) will not be required for the Subject Site.

1.7 Background Reports

This report provides information on the considerations and approach by which Novatech has designed and evaluated the proposed servicing and stormwater management strategies. This report should be read in conjunction with the following associated reports:

- CitiGate 416 Corporate Campus Detailed Servicing and Stormwater Management Report (Phase 1), prepared by Novatech, dated January 9, 2015.
- Phase 1 – Environmental Site Assessment Update, 4175 Strandherd Drive, Ottawa, ON, Report PE6464-LET.0, prepared by Paterson Group, dated March 21, 2024.
- Geotechnical Investigation, Proposed Commercial Development, 4175 Strandherd Drive, Ottawa, ON REPORT PG7725-1, prepared by Paterson Group, dated November 24, 2025.

2.0 WATER SERVICING

2.1 Introduction

The municipal watermain network for the general area surrounding the proposed development was designed as part of the CitiGate 416 Corporate Campus Detailed Servicing and Stormwater Management Report (Novatech, 2015). The water distribution systems along Systemhouse Street and Strandherd Drive are currently supplied by existing 250mm and 400 mm dia. watermains, respectively.

2.2 Proposed Watermain System

Water servicing for the proposed development includes on-site watermain installation. Along the northwest section of the site, a proposed 200 mm diameter watermain will connect to the existing 250 mm diameter watermain on Systemhouse Street. Along the northeast section, the proposed 200 mm diameter watermain will connect to the existing 200 mm diameter water service stub, which ultimately connects to the existing 400 mm diameter watermain on Strandherd Drive

Each of the proposed Commercial Retail Units (CRUs) will be serviced by the proposed on-site watermain network.

Refer to **Figure 4** – Watermain Network Plan for more details.

There are six (6) proposed on-site fire hydrants to service the Subject Site. Additionally, there are three (3) existing hydrants east of the Subject Site on Strandherd Drive, and three (3) existing hydrants north of the Subject Site on Systemhouse Street. The location and details of the proposed hydrants are illustrated on the General Plan of Servies drawings (**125050-GP1** & **-GP2**), located in **Appendix E**.

The combination of the proposed and existing hydrants can provide adequate water supply for fire suppression based on 75m and 150m radius from each hydrant, as shown in **Figure 5 –** Hydrant Coverage Plan. Fire suppression for all proposed CRUs will be provided by sprinkler systems; each building will be supplied with fire department (siamese) connections.

2.3 Proposed Domestic Water Demands

Design criteria outlined in the *City of Ottawa Water Distribution Design Guidelines* (2025), and the *Ministry of* Environment (*MOE) Design Guidelines for Drinking-Water Systems* (2023) were used to determine the theoretical water demands for the proposed development.

The theoretical water demand was determined based on the site's proposed commercial use. The calculation was completed using the criteria outlined in Table 3-2 of the MOE Design Guidelines for Drinking-Water Systems (2023), which specifies a commercial average daily water demand for shopping centres of 5.0 L/m^2/day.

In accordance with the City of Ottawa's recommendations, the Fire Underwriters Survey (FUS) method was used to determine the required fire flow demands for the Subject Site. The analysis identified a maximum fire flow demand of 133 L/s at CRU 1, as presented in Table 2.1. The hydraulic analysis for the proposed watermain distribution system was completed using the maximum fire flow rate of 133 L/s.

The domestic water demands and fire flow for each commercial retail unit of the proposed development are summarized in **Table 2.1** below.

CONNECTION TO EXISTING
200mmØ WATERMAIN
SERVICE STUB

CONNECTION TO EXISTING
250mmØ WATERMAIN

25mmØ REMOTE GARDEN
CENTRE SERVICE

CRU 1
FFE = 96.80 m
USF = 95.05 m

CRU 2
FFE = 96.75 m
USF = 95.00 m

CRU 3
FFE = 96.75 m
USF = 95.00 m

CRU 4
FFE = 96.75 m
USF = 95.00 m

CRU 5
FFE = 97.00 m
USF = 95.25 m

CRU 6
FFE = 96.90 m
USF = 95.15 m

CRU 7
FFE = 96.80 m
USF = 95.05 m

CRU 8
FFE = 96.65 m
USF = 94.90 m

CRU 9
FFE = 96.80 m
USF = 94.85 m

CRU 10
FFE = 96.65 m
USF = 94.90 m

M & E

400mmØ
300mmØ
250mmØ
200mmØ
150mmØ
25mmØ

LEGEND

- SITE BOUNDARY
- 300mmØ EXISTING WATERMAIN AND DIAMETER
- 200mmØ PROPOSED WATERMAIN AND DIAMETER
- PROPOSED HYDRANT LOCATION

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4175 STRANDHERD DRIVE

WATERMAIN NETWORK PLAN

SCALE 1 : 1000 (0 10 20 30 40)
DATE JAN 2026
JOB 125050
FIGURE FIGURE 4

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SHT11X17.DWG - 279mmX432mm

LEGEND

- H3 — PROPOSED FIRE HYDRANT
- E2 — EXISTING FIRE HYDRANT
- 75m RADIUS COVERAGE
- 150m RADIUS COVERAGE

E1 E2 E3 E4 E5 E6

H1 H2 H3 H4 H5 H6

CRU 1 — FFE = 96.60 m, USF = 96.05 m
CRU 2 — FFE = 96.75 m, USF = 95.00 m
CRU 3 — FFE = 96.75 m, USF = 95.00 m
CRU 4 — FFE = 96.75 m, USF = 95.00 m
CRU 5 — FFE = 97.00 m, USF = 95.25 m
CRU 6 — FFE = 96.90 m, USF = 95.15 m
CRU 7 — FFE = 96.80 m, USF = 95.05 m
CRU 8 — FFE = 96.65 m, USF = 94.90 m
CRU 9 — FFE = 96.60 m, USF = 94.90 m
CRU 10 — FFE = 96.65 m, USF = 94.90 m

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4175 STRANDHERD DRIVE

HYDRANT COVERAGE PLAN

SCALE 1 : 1000 (0 10 20 30 40)
DATE JAN 2026 | JOB 125050 | FIGURE FIGURE 5

SHT11X17.DWG - 279mmX432mm

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Table 2.1: Domestic Water Demand Summary

Building ID	Building Area (m^2)	Ave. Daily Demand (L/s)	Max. Daily Demand (L/s)	Peak Hour Demand (L/s)	Fire flow (L/s)
CRU 1	2,640	0.15	0.23	0.41	133
CRU 2	1,580	0.09	0.14	0.25	83
CRU 3	1,880	0.11	0.16	0.29	67
CRU 4	1,130	0.07	0.10	0.18	33
CRU 5	490	0.04	0.04	0.08	33
CRU 6	1,260	0.07	0.11	0.20	67
CRU 7	960	0.06	0.08	0.15	33
CRU 8	480	0.03	0.04	0.08	33
CRU 9	630	0.04	0.05	0.10	33
CRU 10	450	0.03	0.04	0.07	33
Total Demands	**11,500**	**0.67**	**1.00**	**1.80**	**133 (Max)**

2.4 Boundary Conditions and Hydraulic Analysis

The boundary conditions provided by the City of Ottawa correspond to the east connection to the existing 400mm dia. watermain on Strandherd Drive and the north connection to the existing 250mm dia. watermain on Systemhouse Street. These boundary conditions were provided based on domestic water demands provided to the City of Ottawa in request for boundary conditions. The municipal boundary condition data provided by the City of Ottawa, and the boundary request information is included in **Appendix B**.

The following design criteria were taken from Section 4.2.2 – 'Watermain Pressure and Demand Objectives' of the City of Ottawa Design Guidelines for Water Distribution:

- Normal operating pressures are to range between 345 kPa (50 psi) and 552 kPa (80 psi) under Max Day demands.
- Minimum system pressures are to be greater than 276 kPa (40 psi) under Peak Hour demands.
- Minimum system pressures are to be greater than 140 kPa (20 psi) under Max Day + Fire flow demands.

The hydraulic model EPANET was used to analyze the performance of the proposed watermain configuration for three (3) theoretical conditions:

- Maximum HGL
- Peak Hour
- Maximum Day + Fire Flow Demand (133 L/s)

A schematic of the hydraulic model is provided in **Appendix B**, presenting the layout of the proposed watermain network, along with the pipe and node numbering used in the analysis. The model was developed using the site's required water demands and the hydraulic boundary conditions provided by the City of Ottawa.

The results confirm that the system meets the required pressure criteria under each specified design conditions. Additional information, including the hydraulic model schematic and detailed output results are provided in **Appendix B**.

The required pressure criteria and hydraulic model results are summarized in **Table 2.2**.

Table 2.2: Hydraulic Model Summary

Operating Conditions	Demand (L/s)	Fire Flow (L/s)	Min. / Max. Allowable Pressure (kPa/psi)	Min. / Max. Pressure Results (kPa/psi)
High Pressure (Max HGL)	0.67	N/A	552/80 (Max)	550.7 / 79.9 (Max)
Peak Hour	1.00	N/A	276/40 (Min)	495.6 / 71.9 (Min)
Max Daily + Fire Flow Demand (CRU 1)	1.80	133	140/20 (Min)	277.9 / 40.3 (Min)

The proposed water distribution system was checked for high pressures during average daily demand using the hydraulic boundary conditions provided by the City of Ottawa. The model indicated that pressures above 550 kPa (80 psi) do not exist within the site. Therefore, pressure reducing valves will not be required for any building.

It should be noted that the proposed tenants for CRU 1 and CRU 2 require a minimum sprinkler system pressure of 50 psi, in accordance with the building servicing requirements. The hydraulic analysis confirmed that the minimum sprinkler system pressure requirement is satisfied for both CRU 1 and CRU 2 under the maximum demand plus fire flow condition, as shown in the hydraulic analysis results provided in **Appendix B**.

The model indicates that the existing municipal watermain within Strandherd Drive and Systemhouse Street along with the on-site watermain will provide adequate fire flows and system pressures to service the Subject Site under each operating condition.

3.0 SANITARY SERVICING

3.1 Introduction

The sanitary sewer system for the general area surrounding the proposed development was designed as part of the CitiGate 416 Corporate Campus development. Sanitary flows from the proposed development will discharge to the existing 375mm dia. sanitary sewer within Systemhouse Street, which conveys flows downstream to the 525mm dia. trunk sewer within Strandherd Drive, and ultimately outlets to the 750mm dia. South Nepean Collector (SNC) sanitary trunk sewer.

The CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015), established allowable sanitary discharge rates for the Subject Site, referred to as *'Block 3'*. The Sanitary Drainage Area Plan (109203-CG-SAN1) and associated sanitary sewer design sheets from the governing CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015) are provided in **Appendix C**.

3.2 Proposed Sanitary Sewer System

Each Commercial Retail Unit (CRU) within the proposed development will be serviced by a variety of 200mm and 250mm dia. gravity sewers. Sanitary flows from the Subject Site will discharge to the proposed sanitary maintenance hole (SANMH 101), connecting to the existing 375mm dia. sanitary sewer within Systemhouse Street. Sanitary flows are then conveyed downstream to the 525 mm dia. sanitary sewer within Strandherd Drive.

Refer to the General Plan of Services (**125050-GP1** & **-GP2**) located in **Appendix E** for details.

The sanitary flows from the proposed development were accounted for in the original design of the South Nepean Collector (SNC) sanitary trunk sewer; therefore, the existing sanitary sewer system is expected to have sufficient capacity to service the proposed development. It should be noted that the SNC was sized to accommodate the overall CitiGate 416 Corporate Campus development.

3.2.1 Proposed Sanitary Peak Flow

Design Criteria

The total theoretical sanitary peak flow from the proposed development is calculated based on the following design criteria outlined in Section 4 of the *City of Ottawa Sewer Design Guidelines* (2025), *Ministry of Environment (MOE) Design Guidelines for Sewage* Works (2024), and Section 8 of the *Ontario Building Code (*2024*)*:

- Total Site Area = 5.27 ha
- Commercial Retail Avg Flow = 5.0 L/m^2/day (MOE: Table 5-3)
- Restaurant Avg. Flow = 125 L/d/seat (City of Ottawa: Appendix 4-A)
  = 75 L/d/employee (City of Ottawa: Appendix 4-A)
- Restaurant Seats = 1 seat/4m^2 of restaurant floor area
- Restaurant Employees = 1 employee/20m^2 of restaurant floor area
- Commercial Peaking Factor = 1.5
- Infiltration Rate = 0.33 L/s/ha
- Minimum Velocity = 0.6 m/s
- Manning's n = 0.013

Proposed Sanitary Flows

The proposed sanitary peak flows from the Subject Site are presented in **Table 3.1** below.

Table 3.1: Proposed Sanitary Peak Flow Summary

Sanitary Flow Contribution	Commercial Retail Area (m^2)	Restaurant Area (m^2)	Sanitary Peak Flows (L/s)
CRU 1	2,640	-	0.23
CRU 2	1,580	-	0.14
CRU 3	1,880	-	0.16
CRU 4	1,130	-	0.10
CRU 5	-	415	0.25
CRU 6	660	600	0.42
CRU 7	460	500	0.34
CRU 8	-	480	0.29
CRU 9	-	630	0.38
CRU 10	-	460	0.28
Commercial Retail Flows	0.84 ha		0.72
Restaurant Flows	0.31 ha		1.88
Infiltration Flow	5.27 ha		1.74
		Total Sanitary Peak Flow	**4.34**

As summarized in Table 3.1, the proposed development is expected to generate a total sanitary peak flow of **4.34 L/s**. These flows will ultimately discharge to the proposed sanitary maintenance hole (SANMH 101) within Systemhouse Street.

Refer to **Appendix C** for the sanitary sewer design sheet for detailed calculations, and the corresponding Sanitary Drainage Area Plan (**125050-SAN**) located in **Appendix E**.

3.3 Citigate Sanitary Flow Allotment

The CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015) established sanitary peak flow allotments for future development blocks within the overall CitiGate 416 Corporate Campus lands. The Sanitary Drainage Area Plan (109203-CG-SAN1) and associated sanitary sewer design sheets provide sanitary allotment for the Subject Site in reference to *'Block 3'*.

The proposed sanitary peak flows in comparison to the CitiGate *'Block 3'* allowable sanitary peak flows are presented in **Table 3.2** below.

Table 3.2: Allowable and Proposed Peak Flow Summary

Report ID	Sanitary Outlet	Site	Drainage Area	Sanitary Design Flow
*GitiGate 416 Corporate Campus Allowable Sanitary Flow	Systemhouse St. Sanitary Sewer	*Block 3*	5.27 ha	6.06 L/s
4175 Strandherd Drive Proposed Sanitary Flow	Proposed SANMH 101	Subject Site	5.27 ha	4.34 L/s

*Based on calculations from Sanitary Sewer Design Sheet located in *CitiGate 416 Corporate Campus – Detailed Servicing and Stormwater Management Report* (Novatech, 2015)

The total proposed sanitary flows from the Subject Site are 4.34 L/s, which represents a 28% decrease in sanitary flows compared to the allowable sanitary flows for CitiGate 416 Corporate Campus *'Block 3'* (6.06 L/s). This indicates there will be adequate capacity in the downstream sanitary sewer systems to accommodate the proposed commercial development.

4.0 STORM SERVICING AND STORMWATER MANAGEMENT

The post-development storm sewer and stormwater management system has been designed in accordance with the *City of Ottawa Sewer Design Guidelines* (2025) in addition to criteria included in Schedule C of the building lease. The design will adhere to previously established release rates for the area.

4.1 Background Information

The subject site has a drainage area of 5.27 hectares. The site is bound by Systemhouse Street to the North, Standherd Drive to the East, the O'Keefe Municipal Drain to the West and CitiGate '*Block 4'* to the South. CitiGate '*Block 3*' is a phase of the CitiGate 416 Corporate Campus. Refer to the CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015) for further information on the overall development.

4.2 Stormwater Management Criteria

Allowable Release Rates

Release rates from CitiGate '*Block 3*' are summarized in **Table 4.1** and were previously determined as part of CitiGate – 416 Corporate Campus Detailed Servicing and Stormwater Management Report (Novatech, 2015).

Table 4.1: Allowable Release Rates for the O'Keefe Drain

Design Storm	Release Rate (L/s/ha)	Allowable Release Rate (L/s)	On-Site Storage* (m^3/ha)
2-Year	20	106	179
5-Year	35	186	232
10-Year	45	239	267
25-Year	64	339	310
50-Year	75	398	333
100-Year	126	668	351

**Based on 85% imperviousness*

4.2.1 Existing and Proposed Storm Infrastructure

The proposed commercial development will be serviced by approximately 1580m of storm sewers ranging from 300mm to 750mm dia., in addition to an existing 864mm x 1346mm elliptical pipe that is connected to two Vortech hydrodynamic separators for water quality treatment before discharging to the O'Keefe Municipal Drain. Refer to Stormwater Management drawing (**125050-SWM**) for the storm layout located in **Appendix E.**

4.2.2 Minor System (Storm Sewers)

Storm servicing for the Subject Site will be provided using a dual-drainage system. Runoff from frequent events will be conveyed by the proposed storm sewers (minor system), while flows from large storm events that exceed the capacity of the minor system will be stored on the surface in road sags and/or conveyed overland along defined overland flow routes (major system).

Storm Sewer Design Criteria

The following is storm sewer design criteria based on the City of Ottawa Sewer Design Guidelines:

- Rational Method (Q) = 2.78CIA where
    - Q = peak flow (L/s)
    - C = runoff coefficient
        - C = (0.70 * %Imp.) + 0.20
    - I = rainfall intensity for a 2-year return period (mm/hr)
        - $I_{2yr} = 732.951 / [(Tc(min) + 6.199)]^{0.810}$
    - A = site area (ha)
- Minimum Pipe Size = 250 mm
- Minimum / Maximum Full Flow Velocity = 0.8 m/s / 3.0 m/s

The on-site storm sewers will be sized to convey the peak flows corresponding to a 2-year return period storm event throughout the majority of the site. Some of the site will be sized to convey a 5-year return period as per Schedule C of the building lease agreement. Refer to the storm sewer design sheets provided in **Appendix D**.

Inlet Control Devices

Inlet control devices (ICDs) will be used to restrict inflows to the minor system. ICDs will be sized to ensure no surface ponding occurs during the 2-year or 5-year storm event (depending on proximity to CRU1) and to keep peak flows – in combination with the major system – below the allowable release rates as summarized in **Table 4.1**. The uncontrolled flows directed overland have been accounted for as part of the major system design and are included in the overall release rates.

Hydraulic Grade Line

The storm sewers will be designed to ensure the hydraulic grade line (HGL) elevation for a 100-year storm event will provide a minimum 0.30 m clearance from the underside of footing (USF) where the buildings are directly connected to the storm sewers.

4.2.3 Major System (Overland Flow)

Under post-development conditions, the majority of the site will be graded to provide an overland flow path to convey the major system runoff towards Standherd Drive. The uncontrolled flows will be graded to direct overland runoff to the O'Keefe Municipal drain, the Systemhouse Street ROW or the Strandherd Drive ROW. Refer to the Grading Plans (**125050-GR1** & **GR2**).

Major System (Overland Flow) Criteria

Runoff from storms that exceed the minor system capacity is to be stored or conveyed overland within the right-of-way and/or defined drainage easements. The following overland flow criteria from the Ottawa Sewer Design Guidelines will be applied to the design:

- Provide on-site storage for storm runoff which exceeds the allowable release rates listed in **Table 4.1** for all storms up to and including the 100-year event.
- No surface ponding for storms up to and including the 2-year event.
- Ensure that major system flows have a maximum dynamic depth (static ponding + dynamic flow) of 0.35 m in roadways/parking lots or 0.60 m in loading bays during the 100-year event.
- Ensure the product of velocity x depth does not exceed 0.60 during the 100-year event.
- Limit ponding to 0.15 m for all rooftop storage areas.

In addition to the criterion summarized above, Schedule C of the building lease outlines additional criteria in certain areas of the subject site. Best efforts will be made to meet the following:

- No surface ponding for storms up to and including the 5-year event.
- Drawdown times of no more than 30 minutes in the applicable parking lot areas during the 25-year event.
- Ensure maximum ponding depths of no more than 0.30 m during the 100-year event.
- A minimum orifice ICD size of 100mm dia. is to be used.
- Recessed loading dock ramps shall not provide any above ground storage.

The major system is to be evaluated using a hydraulic model to ensure that the maximum total flow depth (static + dynamic) will be restricted to 0.35 m (0.30 m where applicable and possible) during the 100-year storm event; and water levels will not touch the building envelope / lowest opening during the Stress Test event (100-year +20%).

4.3 Proposed Stormwater Management Strategy

Stormwater Quality Control

Existing Vortechs units immediately upstream of the storm sewer outlet to the O'Keefe Municipal Drain have been designed to provide an Enhanced level of water quality control for the contributing drainage area, including the Subject Site. Refer to the CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015) for further information on the existing Vortechs units.

Stormwater Quantity Control

Surface and underground stormwater storage will be provided within the road sags, parking areas, and underground storage chambers. Minimum major system stormwater storage requirements outlined in the CitiGate Detailed Servicing and Stormwater Management Report (Novatech, 2015), have been provided and are summarized in **Table 4.1**.

The storm outlet for the proposed commercial development was designed to accommodate post-development runoff from the site based on a contributing drainage area of 5.30 ha and a runoff coefficient of C=0.80. The proposed development has a total drainage area of 5.27 ha and a runoff coefficient of C=0.80. Therefore, there will be no increase in runoff volume to the O'Keefe Drain from the Subject Site above what was assumed in the overall CitiGate SWM report.

4.3.1 Stormwater Modelling

The PCSWMM model has been developed to account for both minor and major system flows from the development and ensure no adverse impacts on the municipal drain. The results of the analysis were used to:

- Determine the total major and minor system runoff from the site;
- Size the ICDs for each inlet to the storm sewer system;
- Calculate the storm sewer hydraulic grade line for the 100-year storm event;
- Evaluate overland flow depths and ponding volumes during the 100-year event; and
- Ensure no ponding occurs during the 2-year storm event or 5-year storm event (where applicable).

The PCSWMM model schematics and output files are provided in **Appendix D.** The packaged PCSWMM modelling files are provided electronically as part of the submission package.

4.3.2 PCSWMM Model Parameters

Design Storms

The model includes the following design storms based on the City of Ottawa IDF data presented in the *City of Ottawa Sewer Design Guidelines* (2025).

- 6-hour Chicago Storm Distribution
- 24-hour SCS Storm Distribution

PCSWMM Model Schematics, Output Data and Modeling Files

PCSWMM model schematics and output data for the 100-year 6-hour Chicago and 100-year 24-hour SCS storm distributions are provided in **Appendix D**. The PCSWMM modeling files are provided electronically as part of the submission package.

Subcatchment Areas / Runoff Coefficients

- For modeling purposes, the site has been divided into subcatchments based on the drainage areas tributary to each inlet of the proposed storm sewer design. The catchment areas are shown on the Storm Drainage Area Plans (**125050-STM**). Refer to the Grading Plans (**125050-GR1** & **GR2**) and the General Plan of Services (**125050-GP1** & **GP2**) for the location of the high points and low points and the storm sewer layout, respectively.
- Weighted runoff coefficients and percent impervious values are provided in **Appendix D.** As per the *City of Ottawa Sewer Design Guidelines* (2025), the percent impervious values are based on the following equation:

$$\% \text{ Imp.} = (C - 0.20) / 0.7$$

The hydrologic parameters for each subcatchment were developed based on the Grading Plans and the Storm Drainage Area Plans. A summary of the drainage area parameters is provided in **Table 4.2**.

Table 4.2: Subcatchment Parameters

Area ID	Area (ha)	Runoff Coefficient (C)	Percent Imperv. (%)	Flow Length (m)	Width (m)	Slope (%)
A0-1	0.056	0.36	23%	6	101	15.0
A0-2	0.359	0.49	41%	29	122	2.5
A0-3	0.221	0.20	0%	35	64	15.0
A1-1	0.052	0.56	51%	13	41	1.25
A1-2	0.012	0.90	100%	7	17	0.5
A1-3	0.012	0.90	100%	6	19	0.5
A1-4	0.018	0.90	100%	11	16	1.0
A1-5	0.046	0.90	100%	26	17	2.0
A1-6	0.026	0.20	0%	8	33	3.0
A2-1	0.052	0.88	97%	21	24	1.5
A2-10	0.03	0.71	73%	12	26	1.5
A2-11	0.017	0.90	100%	14	12	1.0
A2-12	0.028	0.74	77%	13	21	1.0
A2-13	0.154	0.81	87%	25	61	1.5
A2-14	0.174	0.87	96%	27	66	1.75
A2-15	0.18	0.87	96%	23	79	1.5
A2-16	0.194	0.85	93%	27	72	1.5
A2-17	0.231	0.85	93%	24	98	1.5
A2-18	0.029	0.90	100%	10	30	1.5
A2-19.1	0.075	0.90	100%	27	28	2.5
A2-19.2	0.03	0.90	100%	27	11	2.5
A2-19.3	0.027	0.90	100%	13	20	2.5
A2-19.4	0.042	0.90	100%	20	21	2.5
A2-2	0.037	0.70	71%	12	30	1.5
A2-20	0.157	0.86	94%	20	79	1.0
A2-21	0.018	0.75	79%	6	31	1.0
A2-22	0.019	0.85	93%	9	22	1.5
A2-23	0.11	0.87	96%	22	50	1.5
A2-24	0.153	0.75	79%	33	46	1.5
A2-25	0.111	0.87	96%	23	48	1.5
A2-26	0.314	0.88	97%	41	76	1.5
A2-27	0.018	0.76	80%	9	21	1.0
A2-28	0.024	0.79	84%	10	23	1.5
A2-29	0.064	0.75	79%	10	65	2.0
A2-3	0.102	0.64	63%	31	33	1.5
A2-4	0.029	0.88	97%	11	28	1.5
A2-5	0.271	0.86	94%	44	61	1.5
A2-6	0.231	0.88	97%	31	75	1.5
A2-7	0.121	0.81	87%	24	50	1.5
A2-8	0.112	0.80	86%	29	39	1.5
A2-9	0.152	0.81	87%	24	64	1.5
R-1	0.278	0.90	100%	10	278	1.5
R-10	0.045	0.90	100%	10	45	1.5

Area ID	Area (ha)	Runoff Coefficient (C)	Percent Imperv. (%)	Flow Length (m)	Width (m)	Slope (%)
R-2	0.159	0.90	100%	10	159	1.5
R-3	0.188	0.90	100%	10	188	1.5
R-4	0.119	0.90	100%	10	119	1.5
R-5	0.042	0.90	100%	10	42	1.5
R-6	0.126	0.90	100%	10	126	1.5
R-7	0.096	0.90	100%	10	96	1.5
R-8	0.048	0.90	100%	10	48	1.5
R-9	0.063	0.90	100%	10	63	1.5
Total	**5.27**	**0.80**				

Infiltration

Infiltration losses for all catchment areas were modeled using Horton's infiltration equation, which defines the infiltration capacity of soil over the duration of a precipitation event using a decay function that ranges from an initial maximum infiltration rate to a minimum rate as the storm progresses. The default values as specified in the *City of Ottawa Sewer Design Guidelines* (2025) were used for all catchments.

Horton's Equation:
$f(t) = fc + (fo - fc)e\text{-}k(t)$

Initial infiltration rate: fo = 76.2 mm/hr
Final infiltration rate: fc = 13.2 mm/hr
Decay Coefficient: k = 4.14/hr

Depression Storage

The following default values for depression storage provided in the *City of Ottawa Sewer Design Guidelines* (2025) were used for all catchments:

Depression Storage (pervious areas): 4.67 mm
Depression Storage (impervious areas): 1.57 mm

Subarea Routing

Subarea routing for all subcatchments were set to "Outlet".

Equivalent Width

The equivalent width parameter for all subcatchments is based on the measured flow length. Flow lengths were digitized in PCSWMM as described in Section 5.4.5.6 of the *City of Ottawa Sewer Design Guidelines* (2025).

Inlet Control Devices

Proposed inlet control devices (ICDs) are represented in the model as outlet curves. ICD information is indicated on the General Plan of Services (**125050-GP1** & **GP2**).

Storage Curves (Surface Ponding)

The catchbasin storage curves for ponding in the parking lots were calculated based on the Grading Plan (**125050-GR1** & **GR2**). Conduits were used to model spill points between each catchbasin.

Minor System Conduits (Bend / Exit Losses)

The minor system network was created in Civil3D and imported into PCSWMM. The following exit losses have been inputted into the model. They represent the loss coefficient based on the bend angle, as per the Appendix 6-B in the *City of Ottawa Sewer Design Guidelines* (2025).

Bend Angle	*Loss Coefficient*
0	0.00
15	0.09
30	0.21
45	0.39
60	0.64
75	0.96
90	1.32

Downstream Boundary Condition (Minor System)

The designated minor system outlet for Subject Site is the O'Keefe Municipal Drain to the west of the subject site.

The boundary conditions for the storm outlet are summarized in **Table 4.3**. They are based on Novatech's HEC-RAS model for the O'Keefe drain from the CitiGate – 416 Corporate Campus project. The boundary condition correspondence has been provided in **Appendix D**.

Table 4.3: O'Keefe Drain Boundary Conditions

Storm Event	Boundary Condition HGL (m)
25 mm	92.95
2 Year	93.23
5 Year	93.42
10 Year	93.54
25 Year	93.69
50 Year	93.78
100 Year	93.88

4.4 Minor System

Runoff from the site will be captured by the proposed on-site storm sewer network and attenuated by ICDs. Storage will be provided with a combination of underground storage and surface storage.

Inflows to the storm sewer were modeled based on characteristics of each inlet. All the catchbasins in the roadways and parking areas are located at low points. Inflows to the storm sewer are based on the ICD specified for the inlet and the maximum depth of ponding. ICDs have been sized to limit the outlet peak flows in conjunction with overland flow to the allowable release rates as displayed in **Table 4.1**. Details are outlined as follows in **Table 4.4**. ICD information is indicated on the General Plan of Services (**125050-GP1** & **GP2**).

Table 4.4: Inlet Control Devices and Design Flows

Structure ID	ICD Size & Inlet Rate					
	ICD Type	T/G (m)	Orifice Invert (m)	Max HGL (100-year) (m)	100-year Head on Orifice (m)	100-year Orifice Peak Flow* (L/s)
2-Year Orifices						
MH440	Tempest LMF Vortex 50	96.22	94.22	96.06	1.84	3.08
MH272		96.3	93.92	95.06	1.14	1.49
CBMH252		96.15	94.11	95.83	1.72	2.97
MH428	Tempest LMF Vortex 40	96.19	94.21	95.87	1.66	1.80
CBMH408		96.00	94.05	95.14	1.09	1.45
MH288		96.09	94.06	95.22	1.16	1.50
MH264		96.23	93.95	96.13	2.18	2.08
5-Year Orifices						
MH244	Tempest LMF Vortex 40	96.78	94.04	95.70	1.66	1.80
CBMH228		96.00	93.94	95.62	1.68	1.84
CBMH222		96.00	93.86	96.12	2.26	2.13
CBMH214		96.95	93.84	96.16	2.32	2.13
CBMH206		95.95	93.98	96.09	2.11	2.04

**PCSWMM model results for a 6-hour Chicago storm distribution*

4.5 Hydraulic Grade Line (PCSWMM)

The hydraulic grade line (HGL) within the storm sewer was evaluated using the fixed boundary conditions as presented in **Table 4.3**.

The results of the analysis were used to confirm a minimum freeboard of 0.30m is provided between the 100-year hydraulic grade line (HGL) and the designed underside of footing (USF) elevations for all buildings. The HGL analysis confirms that all buildings will have at least 0.30 m of freeboard between the hydraulic gradeline and the USF elevation. The HGL elevations for the stress test event (20% greater rainfall intensity and total precipitation than the 100-year event) were also reviewed to confirm that the modeled HGL will be below the USF of the buildings. ***Table 4.5*** summarizes the 100-year HGL elevation at each storm manhole downstream of the buildings storm connections within the proposed development.

Table 4.5: 100-Year Hydraulic Gradeline Elevations

Manhole ID	Obvert Elevation	T/G Elevation	HGL Elevation[1]	HGL in Stress Test[1]	Design USF	Clearance from USF (100-Year)
	(m)	(m)	(m)	(m)	(m)	(m)
MH218	94.48	96.36	94.23	94.23	94.90	0.67
MH238	94.38	96.43	94.11	94.13	95.05	0.94
MH242	94.27	96.76	94.01	94.03	95.00	0.99
MH278	94.26	96.3	93.95	93.97	95.00	1.05
MH282	94.53	96.17	94.29	94.29	94.85	0.56
MH284	94.53	97.28	94.27	94.28	94.90	0.63
MH416	94.39	96.57	94.02	94.04	95.00	0.98
MH422	94.66	96.3	94.44	94.45	95.05	0.61
MH462	94.49	96.51	94.07	94.09	95.15	1.08
MH468	94.57	96.61	94.26	94.28	95.25	0.99

[1]6-hour Chicago Storm.

4.6 Major System

The major system was evaluated using PCSWMM to ensure that overland flow depths and velocities conform to City Standards. A summary of ponding depths at each inlet for the 2-year, 5-year, 100-year and stress test events are provided in **Appendix D.** The maximum static and dynamic ponding depths within the site are less than 0.35 m for all events and the product of depth x velocity is less than 0.60 m^2/s.

Table 4.6 displays a summary of the maximum static ponding depths, and the modelled ponding depths/elevations for the 100-year and stress test events.

Table 4.6: Overland Flow Results

Catchbasin ID	Rim Elev. (m)	Max. Static Ponding (Spill Depth)		100-yr Event		Stress-Test Event	
		Spill Elev. (m)	Depth (m)	HGL Elev. (m)[1]	Ponding Depth (m)	HGL Elev. (m)[1]	Ponding Depth (m)
CB202	96.35	96.63	0.28	94.04	0.00	94.05	0.00
CB210	96.28	96.32	0.04	96.09	0.00	96.21	0.00
CB238	96.28	96.32	0.04	95.62	0.00	96.18	0.00
CB250	95.52	96.50	0.98	94.47	0.00	94.48	0.00
CB256	95.50	96.10	0.60	95.83	0.33	96.34	0.84
CB260	96.45	96.65	0.20	95.83	0.00	96.34	0.00
CB406	96.26	96.40	0.14	95.22	0.00	96.13	0.00
CB424	96.36	96.45	0.09	94.44	0.00	94.45	0.00
CB458	96.28	96.45	0.17	96.06	0.00	96.30	0.02
CB460	96.35	96.43	0.08	96.06	0.00	96.30	0.00
CBMH206	95.95	96.25	0.30	96.09	0.14	96.20	0.25
CBMH208	96.20	96.32	0.12	96.09	0.00	96.21	0.01
CBMH214/ST17	95.95	96.25	0.30	96.16	0.21	96.23	0.28
CBMH222	96.00	96.22	0.22	96.12	0.12	96.22	0.22
CBMH228	96.00	96.20	0.20	95.62	0.00	96.18	0.18
CBMH230	96.00	96.20	0.20	95.62	0.00	96.18	0.18
CBMH236	96.25	96.32	0.07	95.62	0.00	96.18	0.00
CBMH246/ST18	96.30	96.43	0.13	95.70	0.00	96.26	0.00
CBMH252	96.15	96.43	0.28	95.83	0.00	96.34	0.19
CBMH254	96.30	96.50	0.20	95.83	0.00	96.34	0.04
CBMH258	96.45	96.65	0.20	95.82	0.00	96.34	0.00
CBMH268	95.95	96.15	0.20	96.13	0.18	96.20	0.25
CBMH276	95.95	96.15	0.20	95.06	0.00	96.20	0.25
CBMH292	96.05	96.27	0.22	95.22	0.00	96.13	0.08
CBMH294	96.00	96.35	0.35	95.22	0.00	96.13	0.13
CBMH402	96.25	96.40	0.15	95.22	0.00	96.13	0.00
CBMH404	96.35	96.41	0.06	95.22	0.00	96.13	0.00
CBMH408	96.00	96.35	0.35	95.14	0.00	96.16	0.16
CBMH414	96.05	96.30	0.25	95.14	0.00	96.16	0.11
CBMH430	96.05	96.30	0.25	95.87	0.00	96.23	0.18
CBMH438	96.00	96.27	0.27	95.87	0.00	96.23	0.23
CBMH444/ST2	96.05	96.25	0.20	96.06	0.01	96.30	0.25
CBMH450	96.00	96.25	0.25	96.06	0.06	96.30	0.30
CBMH454	96.30	96.43	0.13	96.06	0.00	96.30	0.00
CBMH456	96.30	96.45	0.15	96.06	0.00	96.30	0.00
CBMH470	96.45	96.60	0.15	94.49	0.00	94.51	0.00

[1] *6-hour Chicago Storm.*

The modeled ponding depths less than 0.35 m for all events up to and including the stress test, with the exception of CB256. This catchbasin is located in the loading dock of CRU 2 and ponds to a depth of 0.84 m during the stress test event, but still has clearance from the FFE of 96.75 m.

The underground and surface storage provided upstream of each ICD are represented in the model using storage nodes. Storage curves are assigned to each storage node which represent the total storage (underground and surface) at each storage location within the site. The storage curves use a depth vs. area relationship to calculate the corresponding storage volumes at a given elevation. **Table 4.7** summarizes the volume of storage provided by the Stormtech Chambers upstream of each ICD. Refer to the General Plan of Services (**125050-GP1** & **GP2**) for the proposed Stormtech Chamber layout details.

Table 4.7: Stormtech Chamber Volume Requirements

Orifice ID	Stormtech Storage Provided (m^3)	# of Chambers Required	Max. Volume Used (m^3)		
			2-Year	5-Year	100-Year
O-MH440	410	186	184	245	405
O-MH428	264	120	123	159	259
O-CBMH408	285	129	127	163	262
O-MH288	313	142	151	193	313
O-MH272	142	65	64	84	139
O-MH264	110	50	71	93	110
O-CBMH252	125	57	66	84	125
O-MH244	111	50	47	62	99
O-CBMH228	202	92	80	107	184
O-CBMH222	53	24	27	34	53
O-CBMH214	185	84	93	127	185
Total	**2,200**	**1,000**			

The model results demonstrate that each storage area provides sufficient underground storage so that there is no surface ponding during the 2-year event (5-year where applicable). An expanded table of the ponding depths at each low point (including the stress-test event) is provided in **Appendix D**. Based on these results, the proposed storm drainage system will not experience any adverse flooding even with a 20% increase to the 100-year event.

4.7 Peak Flows (PCSWMM)

Table 4.8 provides a summary of the peak flows to the O'Keefe Municipal Drain, Strandherd Drive ROW and the Systemhouse Street ROW for all storm events up to and including the 100-year.

Table 4.8: Summary of Peak Flows (PCSWMM)

Outfall	6-hour Chicago Storm Event			
	2-year	5-year	25-year	100-year
Minor - MD	89	137	145	168
Major - MD	2	18	48	75
Systemhouse St.	5	58	19	139
Strandherd Dr.	33	12	101	25
Total[1]	105	183	302	402
Allowable	106	186	339	668
Difference	**-1**	**-3**	**-37**	**-266**

[1]Total release rate based on varying times to peak at each outfall

4.8 Stormwater Temperature Mitigation

The *Citigate 416 Corporate Campus Detailed Servicing and Stormwater Management Report* (Novatech, 2015) states "*the O'Keefe Drain has been designated as "cool-water fish habitat" … To ensure that the O'Keefe Drain remains a hospitable fish environment, any increase in the water temperature in the drain should be kept to a minimum".* As the stormwater outlet for the Subject Site is the O'Keefe Drain, temperature mitigation practices should be implemented for the proposed development.

Surface ponding on the asphalt is susceptible to an increase in stormwater temperature which can be minimized by storing stormwater in an underground sewer system. Temperature increases will be mitigated through the following;

- Prior to leaving the Subject Site, the 2-year and 5-year storm events are captured underground in the proposed storm sewer system with no surface ponding;
- No stormwater wet ponds are being proposed;
- During larger events, drawdown times will be minimized (<30 minutes for the 25-year event).

5.0 EROSION AND SEDIMENT CONTROL

Temporary erosion and sediment control measures will be implemented on-site during construction in accordance with the Best Management Practices for Erosion and Sediment Control. This includes the following temporary measures:

- Filter socks (catchbasin inserts) will be placed in existing and proposed catchbasins and catchbasin manholes, and will remain in place until vegetation has been established and construction is completed;
- Silt fencing will be placed along the surrounding construction limits;
- Mud mats will be installed at the site entrances;
- Strawbale or rock check dams will be installed in swales and ditches;
- The contractor will be required to perform regular street sweeping and cleaning as required, to suppress dust and to provide safe and clean roadways adjacent to the construction site;

Erosion and sediment control measures should be inspected daily and after every rain event to determine maintenance, repair, or replacement requirements. Sediments or granulars that enter site sewers shall be removed immediately by the contractor. These measures will be implemented prior to the commencement of construction and maintained in good order until vegetation has been established. Refer to the Erosion and Sediment Control Plan (**125050-ESC**) located in **Appendix E** for additional information.

6.0 CONCLUSION

The Site Servicing and Stormwater Management Report has evaluated the servicing (water, sanitary and storm servicing) and stormwater management for the Proposed Commercial Development at 4175 Strandherd Drive.

The principal findings and conclusions of this report are as follows:

- The proposed commercial retail units will be serviced by the existing municipal water and sanitary sewer systems located on Strandherd Drive, and Systemhouse Street. Stormwater servicing will be provided by existing Vortec units which outlet to the O'Keefe Drain.
- Paterson's environmental assessment concluded that a Phase II Environmental Site Assessment is not required for the Subject Site.
- Paterson's geotechnical assessment determined that some areas of the site exceed the permissible grade raise limits. Therefore, lightweight fill will be required within building footprints and adjacent areas where grade raise limits have been exceeded.
- All proposed CRU will be sprinklered and supplied with fire department (Siamese) connections. The Siamese connections will be located within 45m of a nearby fire hydrant. The proposed development includes six (6) proposed on-site fire hydrants.
- The proposed 200 mm diameter on-site watermain will require two connections to the existing municipal system: one to the servicing stub on Strandherd Drive and another to the 250 mm watermain on Systemhouse Street. These watermain connections will provide sufficient water pressure to meet specified operating condition requirements.
- The sanitary sewer design for the proposed commercial retail units complies with the allowable discharge rates established in the CitiGate 416 Corporate Campus servicing plan. All CRUs will discharge to the existing sanitary sewer on Systemhouse Street, which conveys flows to the South Nepean Collector.
- The proposed development includes various methods of controlled and uncontrolled conveyance of stormwater.
    - Storm sewers (minor system) in the parking lots for all ten (10) CRUs have been designed to convey the uncontrolled 5-year peak flow using the rational method.
    - Flows from the CRUs roofs will be attenuated by controlled flow roof drains, which discharge into the minor storm sewer system.
    - Release rates from the proposed development conform to the allowable release rates outlined in the CitiGate 416 Corporate Campus stormwater management design.
- Stormwater temperature mitigation measures will be implemented to protect the O'Keefe Drain fish environment.
- Temporary erosion and sediment control measures will be implemented on-site during construction.

CLOSURE

The preceding report is respectfully submitted for review and approval in support of the Site Plan Application for the Proposed Commercial Development at 4175 Strandherd Drive. Please contact the undersigned should have questions or require additional information.

NOVATECH

Prepared by:

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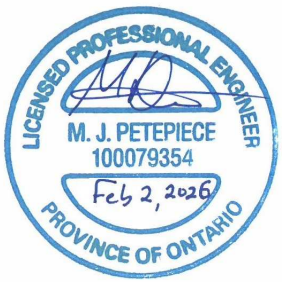
Reviewed/Approved by:



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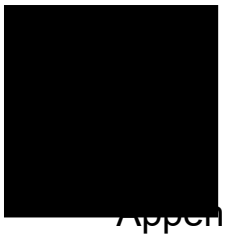
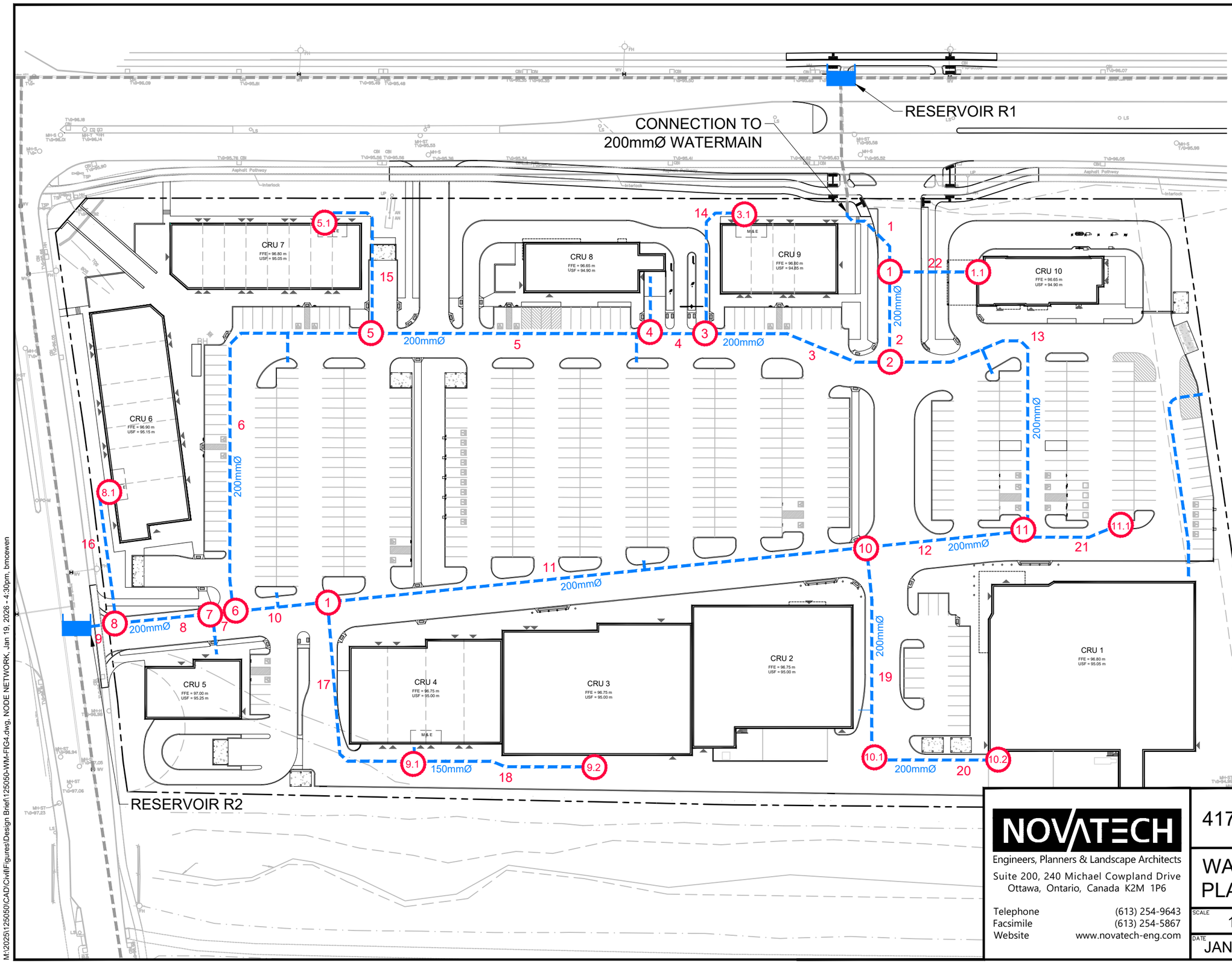


Appendix A
CORRESPONDENCE

Appendix B
WATER DISTRIBUTION



LEGEND

- SITE BOUNDARY
- 300mmØ — EXISTING WATERMAIN AND DIAMETER
- 200mmØ — PROPOSED WATERMAIN AND DIAMETER
- 4 — HYDRAULIC ANALYSIS NODE ID
- 4 — HYDRAULIC ANALYSIS PIPE ID
- HYDRAULIC ANALYSIS RESERVOIR ID

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4175 STRANDHERD DRIVE

WATERMAIN NETWORK PLAN

SCALE 1 : 1000 (0 10 20 30 40)

DATE JAN 2026 | JOB 125050 | FIGURE FIG-WM

SHT11X17.DWG - 279mmX432mm

M:\2025\125050\CAD\Civil\Figures\Design Brief\125050-WM-FIG4.dwg, NODE NETWORK, Jan 19, 2026 - 4:30pm, bmcewen

Water Demand & Consumption Rate Calculations

Node	Commercial	Consumption Rates (L/s)		
	Commercial Area (m^2)	Average Daily	Maximum Daily	Maximum Hourly
N1				
N1.1 - CRU10	450	0.03	0.04	0.07
N2				
N3				
N3.1 - CRU9	630	0.04	0.05	0.10
N4 - CRU8	480	0.03	0.04	0.08
N5				
N5.1 - CRU7	960	0.06	0.08	0.15
N6				
N7 - CRU5	490	0.03	0.04	0.08
N8				
N8.1 - CRU6	1260	0.07	0.11	0.20
N9				
N9.1 - CRU4	1130	0.07	0.10	0.18
N9.2 - CRU3	1880	0.11	0.16	0.29
N10				
N10.1 - CRU2	1580	0.09	0.14	0.25
N10.2 - CRU1	2640	0.15	0.23	0.41
N11				
N11.1				
R1				
R2				
Total	**11500**	**0.67**	**1.00**	**1.80**

Commercial Use Water Consumption (per Table 3-2 - MOE Design Guidelines for Drinking-Water Systems)

Daily Average - Shopping Centres 5000.0 L / 1000m^2/day

Water Demand Parameters (per Table 4.2 - City of Ottawa Design Guidelines - Water Distribution, 2025)

Commerical/Industrial Max Day 1.5 x Avg Day
Commerical/Industrial Peak Hour 1.8 x Max Day

Fire Flow (per Fire Underwriter's Survey): 133 L/s (max)

Junction Report

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
N1	96.0	0.00	152.14	56.14	550.73	79.88
N1.1	96.4	0.03	152.14	55.74	546.81	79.31
N2	96.2	0.00	152.12	55.96	548.97	79.62
N3	96.3	0.00	152.10	55.85	547.89	79.46
N3.1	96.6	0.04	152.10	55.50	544.46	78.97
N4	96.3	0.03	152.09	55.79	547.30	79.38
N5	96.3	0.00	152.07	55.77	547.10	79.35
N5.1	96.8	0.06	152.07	55.32	542.69	78.71
N6	96.6	0.00	152.04	55.44	543.87	78.88
N7	96.7	0.03	152.03	55.38	543.28	78.80
N8	96.8	0.00	152.01	55.21	541.61	78.55
N8.1	96.9	0.07	152.01	55.16	541.12	78.48
N9	96.3	0.00	152.05	55.75	546.91	79.32
N9.1	96.6	0.07	152.05	55.45	543.96	78.90
N9.2	96.6	0.11	152.05	55.45	543.96	78.90
N10	96.5	0.00	152.08	55.58	545.24	79.08
N10.1	96.5	0.09	152.08	55.63	545.73	79.15
N10.2	96.5	0.15	152.08	55.58	545.24	79.08
N11	96.4	0.00	152.09	55.69	546.32	79.24
N11.1	96.3	0.00	152.09	55.79	547.30	79.38
R1	152.2	-10.67	152.20	0.00	0.00	0.00
R2	152.0	9.99	152.00	0.00	0.00	0.00

Maximum Pressure

Pipe Report

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
P1	60.0	200	110	10.67	0.340	1.00	0.034
P2	25.0	200	110	10.64	0.340	1.00	0.034
P3	52.5	200	110	-5.54	0.180	0.30	0.038
P4	15.5	200	110	-5.50	0.180	0.29	0.038
P5	77.5	200	110	-5.47	0.170	0.29	0.038
P6	114.5	200	110	5.41	0.170	0.28	0.038
P7	6.0	200	110	10.09	0.320	0.90	0.034
P8	27.0	200	110	10.06	0.320	0.90	0.034
P9	11.5	200	110	-9.99	0.320	0.89	0.034
P10	26.5	200	110	-4.68	0.150	0.22	0.038
P11	150.0	200	110	-4.86	0.150	0.23	0.038
P12	45.0	200	110	5.10	0.160	0.26	0.038
P13	90.0	200	110	5.10	0.160	0.26	0.038
P14	43.5	150	100	-0.04	0.000	0.00	0.123
P15	46.5	150	100	-0.06	0.000	0.00	0.051
P16	39.0	150	100	-0.07	0.000	0.00	0.189
P17	65.0	150	100	-0.18	0.010	0.00	0.073
P18	51.0	150	100	-0.11	0.010	0.00	0.069
P19	44.0	200	110	0.24	0.010	0.00	0.057
P20	48.0	200	110	-0.15	0.000	0.00	0.067
P21	29.0	150	100	0.00	0.000	0.00	0.000
P22	24.0	150	100	-0.03	0.000	0.00	0.000

Junction Report

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
N1	96.0	0.00	147.18	51.18	502.08	72.82
N1.1	96.4	0.07	147.18	50.78	498.15	72.25
N2	96.2	0.00	147.21	51.05	500.80	72.63
N3	96.3	0.00	147.23	50.98	500.11	72.54
N3.1	96.6	0.10	147.23	50.63	496.68	72.04
N4	96.3	0.08	147.24	50.94	499.72	72.48
N5	96.3	0.00	147.27	50.97	500.02	72.52
N5.1	96.8	0.15	147.27	50.52	495.60	71.88
N6	96.6	0.00	147.33	50.73	497.66	72.18
N7	96.7	0.08	147.34	50.69	497.27	72.12
N8	96.8	0.00	147.38	50.58	496.19	71.97
N8.1	96.9	0.20	147.38	50.53	495.70	71.90
N9	96.3	0.00	147.31	51.01	500.41	72.58
N9.1	96.6	0.18	147.31	50.71	497.47	72.15
N9.2	96.6	0.29	147.31	50.71	497.47	72.15
N10	96.5	0.00	147.26	50.76	497.96	72.22
N10.1	96.5	0.25	147.26	50.81	498.45	72.29
N10.2	96.5	0.41	147.26	50.76	497.96	72.22
N11	96.4	0.00	147.24	50.84	498.74	72.34
N11.1	96.3	0.00	147.24	50.94	499.72	72.48
R1	147.1	12.36	147.10	0.00	0.00	0.00
R2	147.4	-14.17	147.40	0.00	0.00	0.00

Minimum Pressure

Pipe Report

Link ID	Length m	Diameter mm	Roughness	Flow LPS	Velocity m/s	Headloss m/km	Friction Factor
P1	60.0	200	110	-12.36	0.39	1.31	0.033
P2	25.0	200	110	-12.43	0.40	1.33	0.033
P3	52.5	200	110	6.64	0.21	0.42	0.037
P4	15.5	200	110	6.74	0.21	0.43	0.036
P5	77.5	200	110	6.82	0.22	0.44	0.036
P6	114.5	200	110	-6.97	0.22	0.45	0.036
P7	6.0	200	110	-13.89	0.44	1.63	0.033
P8	27.0	200	110	-13.97	0.44	1.65	0.033
P9	11.5	200	110	14.17	0.45	1.69	0.033
P10	26.5	200	110	6.92	0.22	0.45	0.036
P11	150.0	200	110	6.45	0.21	0.39	0.037
P12	45.0	200	110	-5.79	0.18	0.32	0.037
P13	90.0	200	110	-5.79	0.18	0.32	0.037
P14	43.5	150	100	-0.10	0.01	0.00	0.079
P15	46.5	150	100	-0.15	0.01	0.00	0.074
P16	39.0	150	100	-0.20	0.01	0.00	0.046
P17	65.0	150	100	-0.47	0.03	0.01	0.062
P18	51.0	150	100	-0.29	0.02	0.01	0.066
P19	44.0	200	110	0.66	0.02	0.01	0.051
P20	48.0	200	110	-0.41	0.01	0.00	0.054
P21	29.0	150	100	0.00	0.00	0.00	0.000
P22	24.0	150	100	-0.07	0.00	0.00	0.306

Junction Report

Node ID	Elevation m	Demand LPS	Head m	Pressure m	Pressure kPa	Pressure psi
N1	96.0	0.00	144.04	48.04	471.27	68.35
N1.1	96.4	0.04	144.04	47.64	467.35	67.78
N2	96.2	0.00	143.39	47.23	463.33	67.20
N3	96.3	0.00	143.53	47.28	463.82	67.27
N3.1	96.6	0.05	143.53	46.93	460.38	66.77
N4	96.3	0.04	143.57	47.27	463.72	67.26
N5	96.3	0.00	143.77	47.47	465.68	67.54
N5.1	96.8	0.08	143.77	47.02	461.27	66.90
N6	96.6	0.00	144.07	47.47	465.68	67.54
N7	96.7	0.04	144.28	47.63	467.25	67.77
N8	96.8	0.00	145.20	48.40	474.80	68.86
N8.1	96.9	0.11	145.20	48.35	474.31	68.79
N9	96.3	0.00	143.54	47.24	463.42	67.21
N9.1	96.6	0.10	143.54	46.94	460.48	66.79
N9.2	96.6	0.16	143.54	46.94	460.48	66.79
N10	96.5	0.00	140.55	44.05	432.13	62.68
N10.1	96.5	0.14	140.55	44.10	432.62	62.75
N10.2	96.5	0.23	140.55	44.05	432.13	62.68
N11	96.4	0.00	139.66	43.26	424.38	61.55
N11.1	96.3	133.00	124.63	28.33	277.92	40.31
R1	145.6	-61.92	145.60	0.00	0.00	0.00
R2	145.6	-72.07	145.60	0.00	0.00	0.00

Minimum Pressure
Applied Fire Flow
Minimum Building Sprinkler Pressure Requirement (50 psi)

Maximum day plus fire flow demand was modeled for the hydrant node N11.1

The following is a summary of the minimum pressures that occurred for this operating condition.

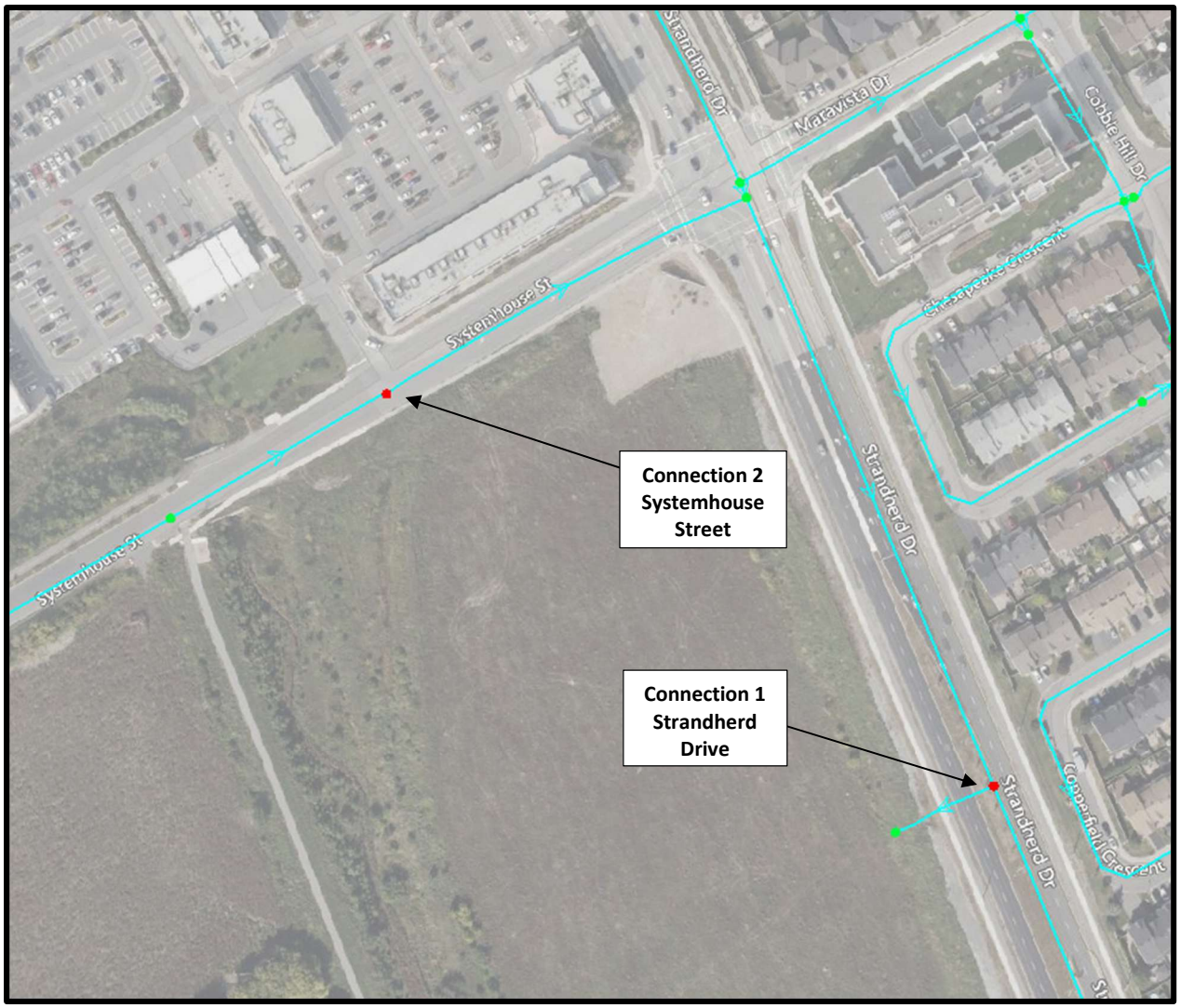
Fire at Junction	Demand (L/s)			Minimum Pressure			
	Maximum Daily	Fire Flow	Max Day + Fire	(m)	kPa	psi	Node
N11.1	1.00	133.00	134.00	28.33	277.92	40.31	N11.1

Boundary Conditions
4175 Strandherd

Provided Information

Scenario	Demand	
	L/min	L/s
Average Daily Demand	24	0.40
Maximum Daily Demand	36	0.60
Peak Hour	64	1.07
Fire Flow Demand	9,000	150.00

Location



Results

Connection 1 – Strandherd Drive

Demand Scenario	Head (m)	Pressure[1] (psi)
Maximum HGL	152.2	80.4
Peak Hour	147.1	73.2
Max Day plus Fire Flow	145.6	71.0

[1] Ground Elevation = 95.7 m

Connection 2 – Systemhouse Street

Demand Scenario	Head (m)	Pressure[1] (psi)
Maximum HGL	152.0	79.8
Maximum HGL	147.4	73.2
Max Day plus Fire Flow	145.6	70.6

[1] Ground Elevation = 96.0 m

Notes

1. The IWSD has recently updated their water modelling software. Any significant difference between previously received BC results and newly received BC results could be attributed to this update.
2. Demands for proposed Connection 1 at existing private water main stub were assigned to upstream junction at Strandherd Drive off the public looped watermains. The engineer must calculate headloss off the dead-end main.
3. As per the Ontario Building Code in areas that may be occupied, the static pressure at any fixture shall not exceed 552 kPa (80 psi.) Pressure control measures to be considered are as follows, in order of preference:
    a. If possible, systems to be designed to residual pressures of 345 to 552 kPa (50 to 80 psi) in all occupied areas outside of the public right-of-way without special pressure control equipment.
    b. Pressure reducing valves to be installed immediately downstream of the isolation valve in the home/ building, located downstream of the meter so it is owner maintained.

Disclaimer

The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.

Project No. 125050
Project Name: 4175 Strandherd Drive
Project Location: Ottawa, ON

Date: September 2025

Domestic Water Demands

Daily Demands - City of Ottawa Water Distrubution Guidelines Table 4.2

Establishment	Daily Demand Volume	
Commercial	28,000	L/ha/day

Commercial Peaking Factors - City of Ottawa Water Distrubution Guidelines

Conditions	Peaking Factor	
Maximum Daily Demand	1.5	x Avg. Day
Peak Hour Demand	1.8	x Max Daily

Proposed Development Conditions

Building ID	Area (m^2)	Avg Daily Demand (L/s)	Max Daily Demand (L/s)	Peak Hour Demand (L/s)
CRU 1	3300	0.11	0.16	0.29
CRU 2	1600	0.05	0.08	0.14
CRU 3	1900	0.06	0.09	0.17
CRU 4	1150	0.04	0.06	0.10
CRU 5	500	0.02	0.02	0.04
CRU 6	1260	0.04	0.06	0.11
CRU 7	980	0.03	0.05	0.09
CRU 8	420	0.01	0.02	0.04
CRU 9	650	0.02	0.03	0.06
CRU 10	500	0.02	0.02	0.04
Totals	**12260**	**0.40**	**0.60**	**1.07**

Required Fire Flows

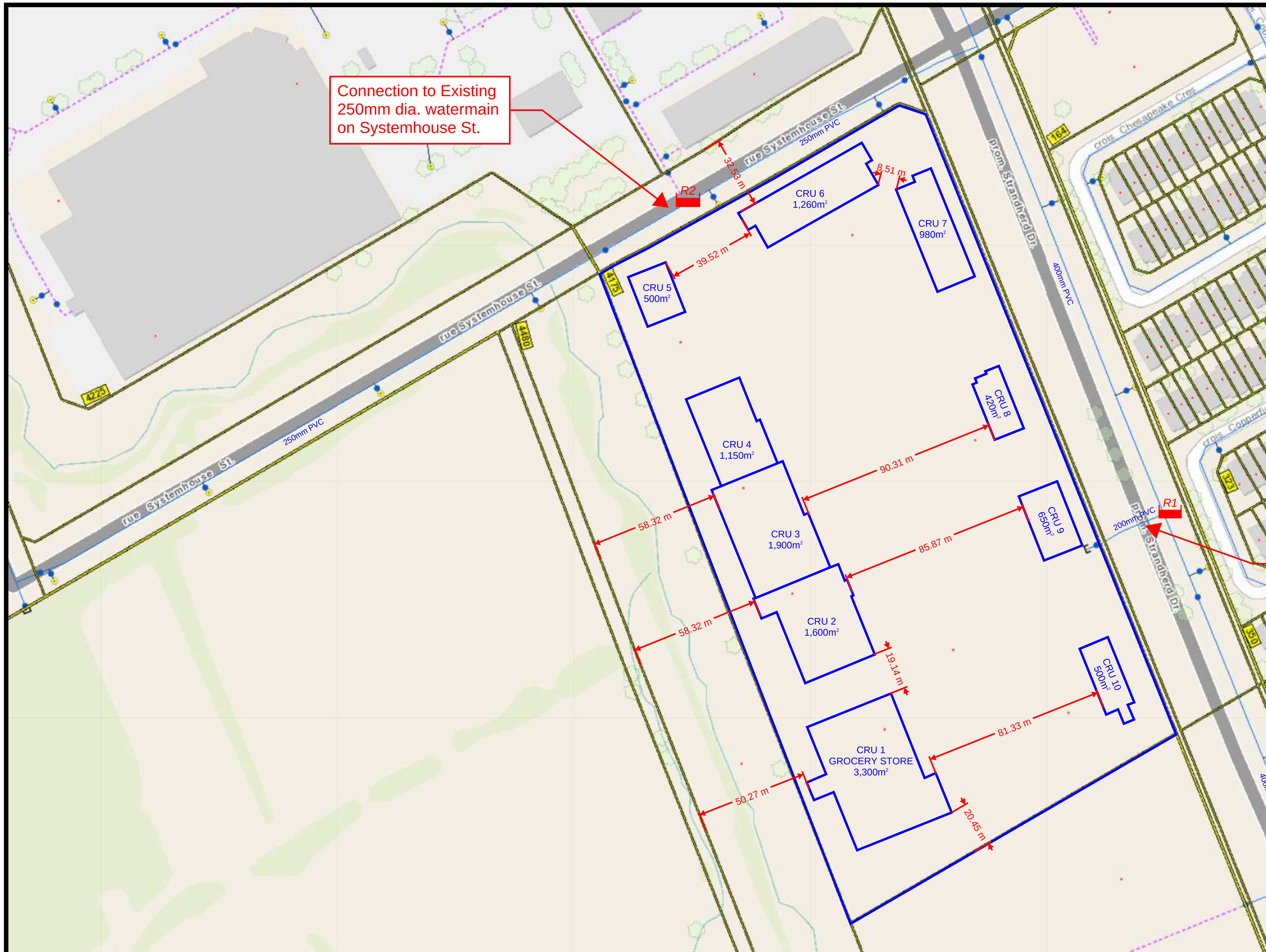
Fire Flow #1 - CRU 3/CRU 6 **67 L/s**

Fire Flow #2 - CRU 2 **83 L/s**

Fire Flow #3 **117 L/s**

Fire Flow #4 - CRU 1 **133 L/s**

Fire Flow #5 **150 L/s**



4175 Strandherd Drive
Citigate Block 3

Boundary Condition Request

September 2025 125050-BC-Fig1

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd Drive - Citigate Block 3
Date: 9/11/2025
Input By: Billy McEwen
Reviewed By: Drew Blair
Drawing Reference: 125050-BC-Fig1

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: General Commercial - CRU 1
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Building Footprint (m^2)	3300			
		Number of Floors/Storeys	1			
		Protected Openings (1 hr) if C<1.0	No			
		Area of structure considered (m^2)			3,300	
	F	**Base fire flow without reductions**				**10,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	0%	**10,000**
		Limited combustible		-15%		
		Combustible	Yes	0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-5,000**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	Yes	-10%	-10%	
				Cumulative Sub-Total	**-50%**	
		Area of Sprinklered Coverage (m^2)	3300	100%		
				Cumulative Total	**-50%**	
5	**Exposure Surcharge**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	10.1 - 20 m		15%	**2,500**
		East Side	>30m		0%	
		South Side	20.1 - 30 m		10%	
		West Side	>30m		0%	
				Cumulative Total	**25%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**8,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**133**
				or	USGPM	2,114

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd Drive - Citigate Block 3
Date: 9/11/2025
Input By: Billy McEwen
Reviewed By: Drew Blair
Drawing Reference: 125050-BC-Fig1

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: General Commercial - CRU 2
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction C	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Building Footprint (m^2)	1600			
		Number of Floors/Storeys	1			
		Protected Openings (1 hr) if C<1.0	No			
		Area of structure considered (m^2)			**1,600**	
	F	**Base fire flow without reductions**				**7,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	0%	**7,000**
		Limited combustible		-15%		
		Combustible	Yes	0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-3,500**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	Yes	-10%	-10%	
				Cumulative Sub-Total	**-50%**	
		Area of Sprinklered Coverage (m^2)	1600	100%		
				Cumulative Total	**-50%**	
5	**Exposure Surcharge**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	2Hr Firewall		0%	**1,050**
		East Side	>30m		0%	
		South Side	10.1 - 20 m		15%	
		West Side	>30m		0%	
				Cumulative Total	**15%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**5,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**83**
				or	USGPM	1,321

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd Drive - Citigate Block 3
Date: 9/11/2025
Input By: Billy McEwen
Reviewed By: Drew Blair
Drawing Reference: 125050-BC-Fig1

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: General Commercial - CRU 3
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction **C**	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Building Footprint (m^2)	1900			
		Number of Floors/Storeys	1			
		Protected Openings (1 hr) if C<1.0	No			
		Area of structure considered (m^2)			**1,900**	
	F	**Base fire flow without reductions**				**8,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	0%	**8,000**
		Limited combustible		-15%		
		Combustible	Yes	0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-4,000**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	Yes	-10%	-10%	
				Cumulative Sub-Total	**-50%**	
		Area of Sprinklered Coverage (m^2)	1900	100%		
				Cumulative Total	**-50%**	
5	**Exposure Surcharge**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	2Hr Firewall		0%	**0**
		East Side	>30m		0%	
		South Side	2Hr Firewall		0%	
		West Side	>30m		0%	
				Cumulative Total	**0%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**4,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**67**
				or	USGPM	1,057

FUS - Fire Flow Calculations

Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd Drive - Citigate Block 3
Date: 9/11/2025
Input By: Billy McEwen
Reviewed By: Drew Blair
Drawing Reference: 125050-BC-Fig1

Legend: Input by User / No Input Required
Reference: Fire Underwriter's Survey Guideline (2020) Formula Method

Building Description: General Commercial - CRU 6
Type II - Non-combustible construction

Step			Choose		Value Used	Total Fire Flow (L/min)
Base Fire Flow						
1	**Construction Material**			**Multiplier**		
	Coefficient related to type of construction **C**	Type V - Wood frame		1.5	0.8	
		Type IV - Mass Timber		Varies		
		Type III - Ordinary construction		1		
		Type II - Non-combustible construction	Yes	0.8		
		Type I - Fire resistive construction (2 hrs)		0.6		
2	**Floor Area**					
	A	Building Footprint (m^2)	1260			
		Number of Floors/Storeys	1			
		Protected Openings (1 hr) if C<1.0	No			
		Area of structure considered (m^2)			**1,260**	
	F	**Base fire flow without reductions**				**6,000**
		F = 220 **C** (**A**)$^{0.5}$				
Reductions or Surcharges						
3	**Occupancy hazard reduction or surcharge**		**FUS Table 3**	**Reduction/Surcharge**		
	(1)	Non-combustible		-25%	0%	**6,000**
		Limited combustible		-15%		
		Combustible	Yes	0%		
		Free burning		15%		
		Rapid burning		25%		
4	**Sprinkler Reduction**		**FUS Table 4**	**Reduction**		
	(2)	Adequately Designed System (NFPA 13)	Yes	-30%	-30%	**-3,000**
		Standard Water Supply	Yes	-10%	-10%	
		Fully Supervised System	Yes	-10%	-10%	
				Cumulative Sub-Total	**-50%**	
		Area of Sprinklered Coverage (m^2)	1260	100%		
				Cumulative Total	**-50%**	
5	**Exposure Surcharge**		**FUS Table 5**		**Surcharge**	
	(3)	North Side	>30m		0%	**1,200**
		East Side	3.1 - 10 m		20%	
		South Side	>30m		0%	
		West Side	>30m		0%	
				Cumulative Total	**20%**	
Results						
6	**(1) + (2) + (3)**	**Total Required Fire Flow, rounded to nearest 1000L/min**			**L/min**	**4,000**
		(2,000 L/min < Fire Flow < 45,000 L/min)		or	L/s	**67**
				or	USGPM	1,057

Appendix C
SANITARY SERVICING

SANITARY SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd
Date: 1/23/2026
Input By: MA / BM
Reviewed By: DDB
Drawing Reference: 125050-SAN

Legend:
- Design Input by User
- As-Built Input by User
- Cumulative Cell
- Calculated Design Cell Output

Reference: City of Ottawa - Sewer Design Guidelines (2025)
MOE - Design Guidelines for Sewage Works (2008)

Location															Design Capacity					
											Extraneous Flow Area Method			Total Design Flow	Proposed Sewer Pipe Sizing / Design					
Area ID	From MH	To MH	Gross Area (ha.)	Commercial Retail Unit (CRU) Areas (ha.)	Restaurant Area (m^2)	Cumulative Commercial Area (ha.)	Cumulative Restaurant Area (m^2)	Average Commercial Flow (L/s)	Average Restaurant Flow (L/s)	Commercial Peaking Factor	Peak Design Flow Q (c) + Q (r) (L/s)	Extraneous Drainage Area (ha.)	Cumulative Extraneous Drainage Area (ha.)	Design Extraneous Flow Q(e) (L/s)	Total Peak Design Flow Q(D) (L/s)	Pipe Length (m)	Pipe Size (mm) and Material	Design Grade So (%)	Capacity Qfull (L/s)	Full Flow Velocity (m/s)	Q(D) / Qfull
A1	CRU-10	135	0.80		460		460	0.00	0.19	1.50	0.28		0.00	0.00	0.28	6.2	200 PVC	2.00	48.4	1.49	0.6%
	135	133					460	0.00	0.19	1.50	0.28	0.80	0.80	0.26	0.54	58.6	200 PVC	0.50	24.2	0.75	2.2%
A2	133	127	0.12				460	0.00	0.19	1.50	0.28	0.12	0.92	0.30	0.58	44.6	200 PVC	0.50	24.2	0.75	2.4%
A3	CRU-1	131	0.49	0.264		0.264		0.15	0.00	1.50	0.23		0.00	0.00	0.23	3.0	200 PVC	2.00	48.4	1.49	0.5%
	131	129				0.264		0.15	0.00	1.50	0.23	0.49	0.49	0.16	0.39	33.0	200 PVC	1.00	34.2	1.06	1.1%
A4	129	127	0.45	0.158		0.422		0.24	0.00	1.50	0.37	0.45	0.94	0.31	0.68	57.9	200 PVC	0.50	24.2	0.75	2.8%
A5	127	119	0.08			0.422	460	0.24	0.19	1.50	0.65	0.08	1.94	0.64	1.29	55.4	250 PVC	0.50	43.9	0.87	2.9%
A6	CRU-9	125	0.56		630		630	0.00	0.26	1.50	0.38		0.00	0.00	0.38	12.6	200 PVC	2.00	48.4	1.49	0.8%
	125	121					630	0.00	0.26	1.50	0.38	0.56	0.56	0.18	0.57	22.8	200 PVC	1.00	34.2	1.06	1.7%
A7	CRU-8	123	0.75		480		480	0.00	0.19	1.50	0.29		0.00	0.00	0.29	18.8	200 PVC	2.00	48.4	1.49	0.6%
	123	121					480	0.00	0.19	1.50	0.29	0.75	0.75	0.25	0.54	6.3	200 PVC	1.00	34.2	1.06	1.6%
-	121	119				0.000	1110	0.00	0.45	1.50	0.67		1.31	0.43	1.11	64.6	200 PVC	1.00	34.2	1.06	3.2%
A8	119	109	0.15			0.422	1570	0.24	0.64	1.50	1.32	0.15	3.40	1.12	2.44	100.2	250 PVC	0.50	43.9	0.87	5.6%
A9	CRU-3	117	0.26	0.188		0.188		0.11	0.00	1.50	0.16		0.00	0.00	0.16	3.2	200 PVC	2.00	48.4	1.49	0.3%
	117	115				0.188		0.11	0.00	1.50	0.16	0.26	0.26	0.09	0.25	49.8	200 PVC	2.00	48.4	1.49	0.5%
A10	CRU-4	115	0.24	0.113		0.113		0.07	0.00	1.50	0.10		0.00	0.00	0.10	6.8	200 PVC	2.00	48.4	1.49	0.2%
	115	113				0.301		0.17	0.00	1.50	0.26	0.24	0.50	0.17	0.43	23.3	200 PVC	1.85	46.5	1.44	0.9%
	113	109				0.301		0.17	0.00	1.50	0.26		0.50	0.17	0.43	44.2	200 PVC	1.00	34.2	1.06	1.2%
A11	CRU-7	111	0.78	0.046	500	0.046	500	0.03	0.20	1.50	0.34		0.00	0.00	0.34	13.4	200 PVC	2.00	48.4	1.49	0.7%
	111	109				0.046	500	0.03	0.20	1.50	0.34	0.78	0.78	0.26	0.60	74.7	200 PVC	0.50	24.2	0.75	2.5%
A12	109	107				0.769	2070	0.45	0.84	1.50	1.93	0.26	4.94	1.63	3.56	31.0	250 PVC	1.00	62.0	1.22	5.7%
	CRU-5	107	0.26		415		415	0.00	0.17	1.50	0.25		0.00	0.00	0.25	8.2	200 PVC	2.00	48.4	1.49	0.5%
-	107	103				0.769	2485	0.45	1.01	1.50	2.18		4.94	1.63	3.81	24.8	250 PVC	1.00	62.0	1.22	6.1%
A13	CRU-6	105	0.33	0.066	600	0.066	600	0.04	0.24	1.50	0.42		0.00	0.00	0.42	1.5	200 PVC	2.00	48.4	1.49	0.9%
	105	103				0.066	600	0.04	0.24	1.50	0.42	0.33	0.33	0.11	0.53	37.9	200 PVC	2.00	48.4	1.49	1.1%
OUTLET	103	101				0.835	3085	0.48	1.25	1.50	2.60		5.27	1.74	4.34	16.0	250 PVC	1.00	62.0	1.22	7.0%
Totals			**5.27**	**0.835**	**3085**	**0.835**	**3085**	**0.48**	**1.25**	**1.50**	**2.60**	**5.27**	**5.27**	**1.74**	**4.34**						

Demand Equation / Parameters

1. **Q(D) =** Q(c) + Q(e) + Q(r)
2. **Q(c) =** 5 $L/m^2/day$ (MOE: Table 5-3)
3. **Q(e) =** 0.33 L/s/ha (City of Ottawa)
4. **Q(r) =** 125 L/d/seat (City of Ottawa: Appendix 4-A)
   75 L/d/employee (City of Ottawa: Appendix 4-A)

Definitions

Q(D) = Peak Design Flow (L/s)
Q(c) = Commercial Flow (L/s)
Q(e) = Extraneous Flow (L/s)
Q(r) = Restaurant Flow (L/s)

Commercial Flows

50000 L/ha/day
1.5 Peak Factor

Restaurant Flow Assumptions

1 seat per $4m^2$ of restaurant floor area
1 employee per $20m^2$ of restaurant floor area
1.5 Peak Factor

Capacity Equation

Q full = $1000*(1/n)*A_p*R^{2/3}*So^{0.5}$

Definitions

Q full = Capacity (L/s)
n = Manning coefficient of roughness (0.013)
A_p = Pipe flow area (m^2)
R = Hydraulic Radius of wetted area (dia./4 for full pipes)
So = Pipe slope/gradient

SANITARY SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

LEGEND

- 0.38 / A-A / 305-307 — DRAINAGE AREA (hectares) / AREA ID / MANHOLE TO MANHOLE
- SANITARY DRAINAGE AREA BOUNDARY
- SANITARY SERVICE LOCATION
- 305 — PROPOSED SANITARY MANHOLE AND PIPE (WITH FLOW DIRECTION)

REFER TO DRAWING 109203-CG-NTB FOR NOTES AND TABLES

JOCKVALE ROAD

STRANDHERD DRIVE

MARAVISTA DRIVE

SANITARY OUTLET A

LIMITS OF CONSTRUCTION

110.1m - 525mmØ SAN @ 0.11%

28.7m-375mmØ SAN @ 0.25%

120.0m-525mmØ SAN @ 0.11%

24.8m-375mmØ SAN @ 0.25%

0.16 / A-22 / 409-101

0.30 / A-21 / 407-409

BLOCK 3

5.28 / A-20 / 407-409

13.3m-250mmØ SAN @ 1.07%

115.8m-375mmØ SAN @ 0.25%

0.20 / A-18 / 405-407

0.92 / A-9 / 101-207

BLOCK 2

11.95 / A-19 / 407-409

FALLOWFIELD ROAD

BLOCK 1

3.49 / A-2 / 201-203

0.40 / A-1 / 201-203

O'KEEFE DRAIN BLOCK 19

SYSTEMHOUSE STREET

81.2m-375mmØ SAN @ 0.14%

0.29 / A-16 / 403-405

118.4m-300mmØ SAN @ 0.25%

NORTEL DRIVE

CROSSKEY PLACE

36.7m-250mmØ SAN @ 0.24%

0.20 / A-7 / 205-101

BLOCK 16

2.50 / A-3 / 201-203

0.09 / A-4 / 201-203

37.1m-250mmØ SAN @ 0.24%

52.2m-300mmØ SAN @ 0.24%

0.13 / A-5 / 203-205

O'KEEFE DRAIN BLOCK 18

FUTURE DEVELOPMENT (BY OTHERS)

0.21 / A-15 / 401-403

67.7m-300mmØ SAN @ 0.25%

2.29 / A-17 / 405-407

107.1m-300mmØ SAN @ 0.25%

118.3m-300mmØ SAN @ 0.25%

114.4m-300mmØ SAN @ 0.25%

29.5m-300mmØ SAN @ 0.25%

26.4m-300mmØ SAN @ 0.25%

0.07 / A-14 / 213-401

1.17 / A-6 / 205-101

O'KEEFE DRAIN BLOCK 17

0.30 / A-11 / 207-209

0.31 / A-12 / 209-211

0.31 / A-13 / 211-213

18.03 / A-8 / 101-207

FUTURE DEVELOPMENT (BY OWNER)

BLOCK 14

FUTURE DEVELOPMENT (BY OWNER)

BLOCK 15

7.98 / A-10 / 207-209

SEE DRAWING No. 109203-CG-SAN2

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

CITI GATE 416 CORPORATE CAMPUS

REGIONAL THE REGIONAL GROUP

No.	REVISION	DATE	BY
4.	ISSUED FOR SWM APPROVAL	AUG 10/14	MER
3.	ISSUED FOR APPROVAL	JUL 23/14	MER
2.	REV. PER CITY COMMENTS / ISS. FOR MOE APPROVAL	JUNE 27/14	MER
1.	ISSUED FOR CITY REVIEW	MAR 31/14	MER

SCALE 1:1000

1:1000
0 10 20 30 40

DESIGN LAB
CHECKED MER
DRAWN MTM/BET
CHECKED MER
APPROVED JGR

LICENSED PROFESSIONAL ENGINEER M.E. RIDDELL 100040125 PROVINCE OF ONTARIO

REGISTERED PROFESSIONAL ENGINEER J.G. RIDDELL PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
CITI GATE 416 CORPORATE CAMPUS

DRAWING NAME
SANITARY DRAINAGE AREA PLAN (OUTLET A)

PROJECT No. 109203-00
REV REV # 4
DRAWING No. 109203-CG-SAN1

NOVATECH FILE NO.: 109203-0
CITY FILE NO.: D07-16-12-0023
DESIGNED BY: LAB
CHECKED BY: MER/MSP
PREPARED March 31, 2014
REVISED: August 10, 2014
REVISED: September 25, 2015 **AS-BUILT**

SANITARY SEWER DESIGN SHEET

Citi Gate 416 Corporate Campus
Phase 1 - As-Built

CITI GATE 416 CORPORATE CAMPUS

NOVATECH Engineers, Planners & Landscape Architects

Location						Wastewater Flow Q(w)		Extraneous Flow Q(i)		Design Flow Q(d)	Proposed Sanitary Sewer						
Area I.D.	Street	Block Number	From MH	To MH	Area (ha)	Individual Peak Flow Rate 50,000 L/ha/d (L/s)	Cumulative Peak Flow Rate (L/s)	Individual Infiltration Rate 0.28 L/s/ha (L/s)	Cumulative Infiltration Rate (L/s)	Peak Design Flow (L/s)	Length (m)	Pipe Size (mm)	Type of Pipe	Grade %	Capacity (L/s)	Full Flow Velocity (m/s)	Percentage of Capacity
Sanitary Outlet A to Strandherd Drive at Maravista Drive **Plan Reference: Sanitary Drainage Area Plan (109203-CG-SAN1)**																	
A-1	Nortel Drive		201	203	0.40	0.35	0.35	0.11	0.11	0.46							
A-2	Nortel Drive	Block 1	201	203	3.49	3.03	3.38	0.98	1.09	4.47							
A-3	Nortel Drive	Block 16	201	203	2.50	2.17	5.55	0.70	1.79	7.34							
A-4	Nortel Drive		201	203	0.09	0.08	5.63	0.03	1.81	7.44	***36.0***	250	PVC	***0.53***	45.16	0.89	16%
A-5	Nortel Drive		203	205	0.13	0.11	5.74	0.04	1.85	7.59	***57.5***	250	PVC	***0.28***	32.83	0.65	23%
A-6	Nortel Drive	Block 17	205	101	1.17	1.02	6.75	0.33	2.18	8.93							
A-7	Nortel Drive		205	101	0.20	0.17	6.93	0.06	2.23	9.16	***37.3***	250	PVC	***0.21***	28.43	0.56	32%
A-9	Crosskey Place		101	207	0.92	0.80	7.73	0.26	7.54	15.27							
A-8	Crosskey Place	Block 14	101	207	18.03	15.65	23.38	5.05	5.05	28.43	***29.0***	300	PVC	***0.17***	41.59	0.57	68%
A-10	Nortel Drive	Block 15	207	209	7.98	6.93	30.30	2.23	9.77	40.08							
A-11	Nortel Drive		207	209	0.30	0.26	30.56	0.08	9.86	40.42	***106.5***	300	PVC	***0.27***	52.42	0.72	77%
A-12	Nortel Drive		209	211	0.31	0.27	30.83	0.09	9.95	40.78	***118.8***	300	PVC	***0.29***	54.33	0.74	75%
A-13	Nortel Drive		211	213	0.31	0.27	31.10	0.09	10.03	41.13	***114.6***	300	PVC	***0.22***	47.32	0.65	87%
A-14	Systemhouse Street		213	401	0.07	0.06	31.16	0.02	10.05	41.22	***26.4***	300	PVC	***0.23***	48.38	0.66	85%
A-15	Systemhouse Street		401	403	0.21	0.18	31.35	0.06	10.11	41.46	***86.8***	300	PVC	***0.28***	53.38	0.73	78%
A-16	Systemhouse Street		403	405	0.29	0.25	31.60	0.08	10.19	41.79	***118.8***	300	PVC	***0.32***	57.07	0.78	73%
A-17	Systemhouse Street	Block 18	405	407	2.29	1.99	33.59	0.64	10.83	44.42							
A-18	Systemhouse Street		405	407	0.20	0.17	33.76	0.06	10.89	44.65	***80.4***	375	PVC	***0.14***	68.44	0.60	65%
A-19	Systemhouse Street	Block 2	407	409	11.95	10.37	44.13	3.35	14.24	58.37							
A-20	Systemhouse Street	Block 3	407	409	5.28	4.58	48.72	1.48	15.71	64.43							
A-21	Systemhouse Street		407	409	0.30	0.26	48.98	0.08	15.80	64.77	***117.2***	375	PVC	***0.25***	91.46	0.80	71%
A-22	Systemhouse Street		409	101	0.16	0.14	49.11	0.04	15.84	64.96	***54.8***	375	PVC	***0.24***	89.61	0.79	72%
					56.58					**64.96**							

Notes:
1. Q(d) = Q(w) + Q(i) , where
2. Q(i) = 0.28 L/s/ha
3. Peaking Factor = 1.5

Q(d) = Design Flow (L/s)
Q(w) = Peak Wastewater Flow (L/s)
Q(i) = Extraneous Flow (L/s)

Legend
0.20 As-built pipe grade (%) or length (m)

REGISTERED PROFESSIONAL ENGINEER
J.G. RIDDELL
25/9/15
PROVINCE OF ONTARIO

NOVATECH FILE NO.: 109203-0
CITY FILE NO.: D07-16-12-0023
DESIGNED BY: LAB
CHECKED BY: MER/MSP
DATE (Issued with report): March 31, 2014
REVISED : August 10, 2014
REVISED : September 25, 2015 **AS-BUILT**

SANITARY SEWER DESIGN SHEET

Citi Gate 416 Corporate Campus
Phase 1 - As-Built

CITI GATE 416 CORPORATE CAMPUS

NOVATECH Engineers, Planners & Landscape Architects

Location						Wastewater Flow Q(w)		Extraneous Flow Q(i)		Design Flow Q(d)	Proposed Sanitary Sewer						
Area I.D.	Street	Block Number	From MH	To MH	Area (ha)	Individual Peak Flow Rate 50,000 L/ha/d (L/s)	Cumulative Peak Flow Rate (L/s)	Individual Infiltration Rate 0.28 L/s/ha (L/s)	Cumulative Infiltration Rate (L/s)	Peak Design Flow (L/s)	Length (m)	Pipe Size (mm)	Type of Pipe	Grade %	Capacity (L/s)	Full Flow Velocity (m/s)	Percentage of Capacity
Sanitary Outlet B to Strandherd Drive at Kennevale Drive **Plan** **Reference: Sanitary Drainage Area Plan (109203-CG-SAN2)**																	
C-1	Nortel Drive	Lands Owned by Others	Fut	501	22.68	19.69	19.69	6.35	6.35	26.04	***4.0***	300	PVC	***0.20***	45.12	0.62	58%
B-1	Dealership Street	Lands Owned by Others	Fut	501	27.06	23.49	23.49	7.58	7.58	31.07	***12.5***	300	PVC	***0.20***	45.12	0.62	69%
B-2	Dealership Street	Block 11	501	503	2.72	2.36	45.54	0.76	14.69	60.23							
B-3	Dealership Street	Block 10	501	503	2.14	1.86	47.40	0.60	15.29	62.68							
B-4	Dealership Street		501	503	0.28	0.24	47.64	0.08	15.37	63.01	***119.5***	450	PVC	***0.14***	111.29	0.68	57%
B-5	Dealership Street	Block 9	503	505	1.84	1.60	49.24	0.52	15.88	65.12							
B-6	Dealership Street		503	505	0.29	0.25	49.49	0.08	15.96	65.45	***119.2***	450	PVC	***0.16***	118.97	0.72	55%
B-7	Dealership Street	Block 12 (SWM)	505	507	3.20	2.78	52.27	0.90	16.86	69.12							
B-8	Dealership Street	Block 8	505	507	1.64	1.42	53.69	0.46	17.32	71.01							
B-9	Dealership Street		505	507	0.20	0.17	53.86	0.06	17.37	71.24	***85.7***	450	PVC	***0.12***	103.03	0.63	69%
B-10	Dealership Street	Block 19	507	509	2.51	2.18	56.04	0.70	18.08	74.12							
B-11	Dealership Street		507	509	0.13	0.11	56.15	0.04	18.11	74.27	***55.9***	450	PVC	***0.16***	118.97	0.72	62%
B-12	Philsar Street	Block 6	603	601	1.62	1.41	1.41	0.45	0.45	1.86							
B-13	Philsar Street		603	601	0.23	0.20	1.61	0.06	0.52	2.12	***41.2***	250	PVC	***0.19***	27.04	0.53	8%
B-15	Philsar Street		601	509	0.19	0.16	1.77	0.05	0.57	2.34	***101.2***	250	PVC	***0.25***	31.02	0.61	8%
B-16	Dealership Street	Block 4	509	511	3.39	2.94	60.87	0.95	19.63	80.50							
B-17	Dealership Street		509	511	0.24	0.21	61.08	0.07	19.70	80.78	***99.5***	450	PVC	***0.17***	122.63	0.75	66%
B-14	Dealership Street	Block 5	511	513	2.14	1.86	62.93	0.60	20.30	83.23							
B-18	Dealership Street		511	513	0.20	0.17	63.11	0.06	20.36	83.46	***75.9***	450	PVC	***0.20***	133.02	0.81	63%
B-19	Outlet to Lift Station		513	515	0.04	0.03	63.14	0.01	20.37	**83.51**	***35.5***	450	PVC	***0.42***	192.76	1.17	43%
					72.74												

Notes:
1. Q(d) = Q(w) + Q(i) , where
2. Q(i) = 0.28 L/s/ha
3. Peaking Factor = 1.5

Q(d) = Design Flow (L/s)
Q(w) = Peak Wastewater Flow (L/s)
Q(i) = Extraneous Flow (L/s)

Legend:
0.20 As-built pipe grade (%) or length (m)

REGISTERED PROFESSIONAL ENGINEER
J.G. RIDDELL
25/9/15
PROVINCE OF ONTARIO

Appendix D
STORM SERVICING & STORMWATER MANAGEMENT

STORM SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

Novatech Project #: 125050
Project Name: 4175 Strandherd
Date: 1/23/2026
Input By: MA / BM
Reviewed By: DDB
Drawing Reference: 125050-STM

2 Year	**Storm Design Event**

Legend:
- Design Input by User
- As-Built Input by User
- Cumulative Cell
- Calculated Design Cell Output
- Calculated Uncontrolled Peak Flow Cell Output
- Design Input Restricted Peak Flow Cell

Reference: City of Ottawa - Sewer Design Guidelines (2025)
MOE - Design Guidelines for Sewage Works (2008)

Location			**Demand**									**Design Capacity**				
			Flow									**Proposed Sewer Pipe Sizing / Design**				
Area ID	**From MH**	**To MH**	**Area A (ha.)**	**Runoff Coefficient C**	**Indivi. 2.78 AC**	**Accum. 2.78 AC**	**Time of Conc. Tc (min.)**	**Rain Intensity I (mm/hr)**	**Total Uncontrolled Peak Flow Q (L/s)**	**Controlled Flow (L/s)**	**Total Controlled and Uncontrolled Peak Flow (L/s)**	**Pipe Length (m)**	**Pipe Size (mm) and Material**	**Design Grade So (%)**	**Time of Flow (min.)**	**Q / Qfull**
1	456	454	0.09	0.81	0.20	0.20	10.00	76.81	15.6		15.6	9.8	300 PVC	1.00	0.12	15.4%
2	454	444	0.13	0.69	0.25	0.45	10.12	76.35	34.5		34.5	39.7	300 PVC	0.50	0.68	48.4%
5	450	444	0.12	0.81	0.27	0.27	10.00	76.81	20.8		20.8	4.7	300 PVC	0.50	0.08	29.1%
3	444	440	0.27	0.86	0.65	1.37	10.79	73.88	101.1		101.1	10.2	300 PVC	0.50	0.17	141.7%
5	**440**	**426**				1.37	10.97	73.27	100.2	**1.88**	**1.9**	11.1	300 PVC	0.50	0.19	2.6%
3A	470	468	0.05	0.56	0.08	0.08	10.00	76.81	6.0		6.0	19.9	300 PVC	0.35	0.41	10.0%
CRU-5	**CRU-5**	**468**	0.05	0.90	0.13	0.13	10.00	76.81	9.6	**1.9**	**1.9**	22.6	300 PVC	1.50	0.22	1.5%
	468	462	0.13	0.90	0.33	0.53	10.41	75.28	39.8		**7.9**	29.3	300 PVC	0.25	0.71	15.6%
CRU-6	**CRU-6**	**462**	0.05	0.57	0.08	0.08	10.00	76.81	6.1	**5.7**	**5.7**	14.2	300 PVC	1.00	0.17	5.7%
4A	466	464	0.03	0.90	0.08	0.08	10.00	76.81	5.8		5.8	30.9	300 PVC	0.35	0.63	9.7%
	464	462				0.08	10.63	74.47	5.6		5.6	27.4	450 PVC	0.25	0.50	3.8%
	462	426				0.68	11.13	72.71	49.6		**19.2**	19.4	600 CONC	0.15	0.38	7.7%
5A	438	430	0.11	0.80	0.24	0.24	10.00	76.81	18.8		18.8	6.2	300 PVC	0.50	0.11	26.3%
4	430	428	0.23	0.88	0.56	0.81	10.11	76.40	61.7		61.7	6.2	300 PVC	0.50	0.11	86.5%
	428	**426**				0.81	10.21	76.00	61.4	**1.17**	**1.2**	10.8	300 PVC	0.50	0.18	1.6%
	426	418				2.86	11.51	71.44	204.2		**22.2**	20.2	600 CONC	0.15	0.40	9.0%

STORM SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

Location			Demand									Design Capacity				
			Flow									Proposed Sewer Pipe Sizing / Design				
Area ID	From MH	To MH	Area A (ha.)	Runoff Coefficient C	Indivi. 2.78 AC	Accum. 2.78 AC	Time of Conc. Tc (min.)	Rain Intensity I (mm/hr)	Total Uncontrolled Peak Flow Q (L/s)	Controlled Flow (L/s)	Total Controlled and Uncontrolled Peak Flow (L/s)	Pipe Length (m)	Pipe Size (mm) and Material	Design Grade So (%)	Time of Flow (min.)	Q / Qfull
5B	424	420	0.02	0.90	0.05	0.05	10.00	76.81	3.8		3.8	24.0	300 PVC	0.50	0.41	5.4%
CRU-7	CRU-7	422	0.10	0.90	0.25	0.25	10.00	76.81	19.2	**4.8**	**4.8**	14.9	300 PVC	1.00	0.18	4.8%
	422	420				0.25	10.18	76.12	19.0		**4.8**	15.7	300 PVC	0.35	0.32	8.0%
	420	418				0.30	10.50	74.94	22.5		**8.6**	33.7	300 PVC	0.35	0.69	14.5%
	418	416				3.16	11.91	70.17	221.6		**30.9**	9.9	600 CONC	0.15	0.19	12.4%
CRU-4	CRU-4	416	0.12	0.90	0.30	0.30	10.00	76.81	23.1	**3.8**	**3.8**	47.7	300 PVC	1.00	0.58	3.8%
	416	286				3.46	12.10	69.57	240.6		**34.7**	55.3	600 CONC	0.15	1.08	14.0%
6C	404	402	0.05	0.78	0.11	0.11	10.00	76.81	8.3		8.3	27.9	300 PVC	0.50	0.48	11.7%
6B	402	400				0.11	10.48	75.03	8.1		8.1	32.4	300 PVC	0.50	0.55	11.4%
	400	294	0.03	0.72	0.06	0.17	11.03	73.07	12.3		12.3	10.7	300 PVC	0.35	0.22	20.6%
7A	294	288	0.18	0.87	0.44	0.60	11.25	72.33	43.7		43.7	6.1	300 PVC	0.50	0.10	61.2%
6A	292	288	0.15	0.81	0.34	0.34	10.00	76.81	25.9		25.9	6.1	300 PVC	0.50	0.10	36.4%
	288	286				0.94	11.35	71.98	67.8	**1.06**	**1.1**	11.0	300 PVC	0.50	0.19	1.5%
6	414	410	0.15	0.81	0.34	0.34	10.00	76.81	25.9		25.9	3.4	300 PVC	0.50	0.06	36.4%
7	410	408	0.17	0.87	0.41	0.75	10.06	76.59	57.4		57.4	8.8	300 PVC	0.50	0.15	80.4%
	408	286				0.75	10.21	76.02	56.9	**1.04**	**1.0**	10.4	300 PVC	0.50	0.18	1.5%
	286	278				5.15	13.19	66.40	341.9		**36.8**	18.8	600 CONC	0.15	0.37	14.8%
CRU-8	CRU-8	284	0.05	0.90	0.13	0.13	10.00	76.81	9.6	**2.9**	**2.9**	20.3	300 PVC	1.00	0.24	2.9%
	284	280				0.13	10.24	75.88	9.5		**2.9**	8.8	300 PVC	0.50	0.15	4.1%
CRU-9	CRU-9	282	0.06	0.90	0.15	0.15	10.00	76.81	11.5	**3.8**	**3.8**	14.1	300 PVC	1.00	0.17	3.8%
	282	280				0.15	10.17	76.16	11.4		**3.8**	22.3	300 PVC	0.50	0.38	5.3%
	280	278				0.28	10.55	74.76	20.6		**6.7**	33.3	375 PVC	0.25	0.69	7.3%
CRU-3	CRU-3	278	0.19	0.90	0.48	0.48	10.00	76.81	36.5	**5.7**	**5.7**	41.2	300 PVC	1.00	0.50	5.7%
	278	262				5.90	13.56	65.40	385.8		**49.2**	36.4	600 CONC	0.15	0.71	19.8%

STORM SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

Location			Demand									Design Capacity				
			Flow									Proposed Sewer Pipe Sizing / Design				
Area ID	From MH	To MH	Area A (ha.)	Runoff Coefficient C	Indivi. 2.78 AC	Accum. 2.78 AC	Time of Conc. Tc (min.)	Rain Intensity I (mm/hr)	Total Uncontrolled Peak Flow Q (L/s)	Controlled Flow (L/s)	Total Controlled and Uncontrolled Peak Flow (L/s)	Pipe Length (m)	Pipe Size (mm) and Material	Design Grade So (%)	Time of Flow (min.)	Q / Qfull
8A	268	264	0.23	0.85	0.54	0.54	10.00	76.81	41.7		41.7	7.0	300 PVC	0.50	0.12	58.5%
	264	262				0.54	10.12	76.35	41.5	**1.26**	**1.3**	10.1	300 PVC	0.50	0.17	1.8%
8	276	272	0.19	0.85	0.45	0.45	10.00	76.81	34.5		34.5	6.6	300 PVC	0.50	0.11	48.3%
	272	262				0.45	10.11	76.38	34.3	**1.04**	**1.0**	3.8	300 PVC	0.50	0.06	1.5%
	262	226				6.89	14.27	63.54	437.9		**51.5**	22.7	600 CONC	0.15	0.45	20.7%
9C	250	248	0.05	0.90	0.13	0.13	10.00	76.81	9.6		9.6	54.5	300 PVC	0.50	0.93	13.5%
CRU-1	CRU-1	248	0.28	0.90	0.70	0.70	10.00	76.81	53.8	**9.5**	**9.5**	5.2	300 PVC	2.00	0.04	6.7%
9E	258	254	0.07	0.90	0.18	0.18	10.00	76.81	13.5		13.5	30.0	300 PVC	0.50	0.51	18.9%
9D	254	252	0.06	0.90	0.15	0.33	10.51	74.90	24.4		24.4	30.0	300 PVC	0.50	0.51	34.1%
9B	252	248	0.08	0.90	0.20	0.53	11.02	73.09	38.4	**1.75**	**1.8**	6.0	300 PVC	0.50	0.10	2.5%
	248	242				1.35	11.13	72.74	98.3		**20.9**	40.3	450 CONC	0.25	0.74	14.0%
CRU-2	CRU-2	242	0.16	0.90	0.40	0.40	10.00	76.81	30.7	**4.8**	**4.8**	8.2	300 PVC	2.00	0.07	3.4%
9A	246	244	0.16	0.86	0.38	0.51	10.93	73.41	37.3		37.3	12.5	300 PVC	0.50	0.21	52.2%
	244	242				0.51	11.14	72.68	36.9	**1.18**	**1.2**	13.4	300 PVC	0.50	0.23	1.7%
	242	240				2.26	11.87	70.31	158.8		**26.8**	36.9	450 CONC	0.25	0.68	18.0%
	240	226				2.26	12.55	68.24	154.2		**26.8**	6.9	450 CONC	0.25	0.13	18.0%
10B	236	230	0.04	0.80	0.09	0.09	10.00	76.81	6.8		6.8	38.6	300 PVC	0.50	0.66	9.6%
10A	230	228	0.11	0.87	0.27	0.36	10.66	74.37	26.4		26.4	19.0	450 CONC	0.25	0.35	17.8%
9	228	226	0.15	0.75	0.31	0.67	11.01	73.14	48.8	**1.23**	**1.2**	17.1	300 PVC	0.50	0.29	1.7%
	226	220				9.82	12.67	67.87	666.4		**79.5**	19.0	750 CONC	0.10	0.39	21.7%
10	222	220	0.11	0.87	0.27	0.27	10.00	76.81	20.4	**1.33**	**1.3**	3.6	300 PVC	0.50	0.06	1.9%
	220	216				10.08	13.07	66.74	673.1		**80.9**	21.5	750 CONC	0.10	0.44	22.0%

STORM SEWER DESIGN SHEET

NOVATECH
Engineers, Planners & Landscape Architects

Location			Demand									Design Capacity				
			Flow									Proposed Sewer Pipe Sizing / Design				
Area ID	From MH	To MH	Area A (ha.)	Runoff Coefficient C	Indivi. 2.78 AC	Accum. 2.78 AC	Time of Conc. Tc (min.)	Rain Intensity I (mm/hr)	Total Uncontrolled Peak Flow Q (L/s)	Controlled Flow (L/s)	Total Controlled and Uncontrolled Peak Flow (L/s)	Pipe Length (m)	Pipe Size (mm) and Material	Design Grade So (%)	Time of Flow (min.)	Q / Qfull
CRU-10	**CRU-10**	**218**	0.05	0.90	0.13	0.13	10.00	76.81	9.6	**2.9**	**2.9**	7.8	300 PVC	1.00	0.09	2.9%
	218	216				0.13	10.09	76.45	9.6		**2.9**	36.6	300 PVC	1.00	0.44	2.9%
	216	212				10.21	13.51	65.52	668.9		**83.8**	15.7	750 CONC	0.10	0.32	22.8%
11	**214**	**212**	0.31	0.88	0.76	0.76	10.00	76.81	58.2	**1.27**	**1.3**	9.5	300 PVC	0.50	0.16	1.8%
	212	204				10.97	13.84	64.66	709.2		**85.0**	25.3	750 CONC	0.10	0.52	23.2%
12A	208	206	0.04	0.79	0.09	0.09	10.00	76.81	6.7		6.7	42.0	750 CONC	0.15	0.71	1.5%
12	**206**	**204**	0.06	0.75	0.13	0.21	10.71	74.18	15.8	**1.18**	**1.2**	24.3	300 PVC	0.88	0.31	1.2%
	204	EX				11.18	14.36	63.32	708.0		**86.2**	83.2	855 x 1345 ELIP CONC (1050)	0.10	1.38	9.6%
13	200	EX STM	0.03	0.20	0.02	0.02	10.00	76.81	1.3		1.3	5.2	300 PVC	1.00	0.06	1.3%
	EX STM	HW				11.20	15.73	60.09	672.8		**87.5**	4.2	855 x 1345 ELIP CONC (1050)	0.22	0.05	6.5%

Demand Equation / Parameters

1. Q = 2.78 ACI

Definitions

Q = Peak flow in litres per second (L/s)
A = Area in hectares (ha)
C = Weighted runoff coefficient (increased by 25% for 100-year)
I = Rainfall intensity in millimeters per hour (mm/hr)

Rainfall intensity is based on City of Ottawa IDF data presented in the City of Ottawa - Sewer Design Guidelines (2025)

Capacity Equation

Q full = $1000*(1/n)*A_p*R^{2/3}*So^{0.5}$

Definitions

Q full = Capacity (L/s)
n = Manning coefficient of roughness (0.013)
A_p = Pipe flow area (m^2)
R = Hydraulic Radius of wetted area (dia./4 for full pipes)
So = Pipe slope/gradient

8.5.2 Water Quantity

Public Roads

The storm sewers in the public right-of-ways will convey stormwater uncontrolled for storm events up to and including the 5-year storm event. For storm greater than the 5-year storm event, the public right-of-ways will provide approximately 100 m^3/ha of storage within the road sags.

While, peak flows from the right-of-ways will be higher than pre-development conditions, the SWM facility on the west-side of the O'Keefe Drain has been oversized to ensure that flows in the O'Keefe Drain do not exceed pre-development levels.

Private Sites

The private sites east of the O'Keefe Drain will be designed to provide sufficient on-site storage to ensure that peak flows in the O'Keefe Drain are maintained to below pre-development levels at all stages of development. Per hectare release rates and on-site storage requirements (based on 85% impervious) are shown in **Table 8.13**.

Table 8.13: SWM Targets for Areas East of the O'Keefe Drain

Design Event	Release Rate (L/s/ha)	On-Site Storage* (m^3/ha)
2-yr Event	20	179
5-yr Event	35	232
10-yr Event	45	267
25-yr Event	64	310
50-yr Event	75	333
100-yr Event	126	351

** Based on 85% imperviousness*

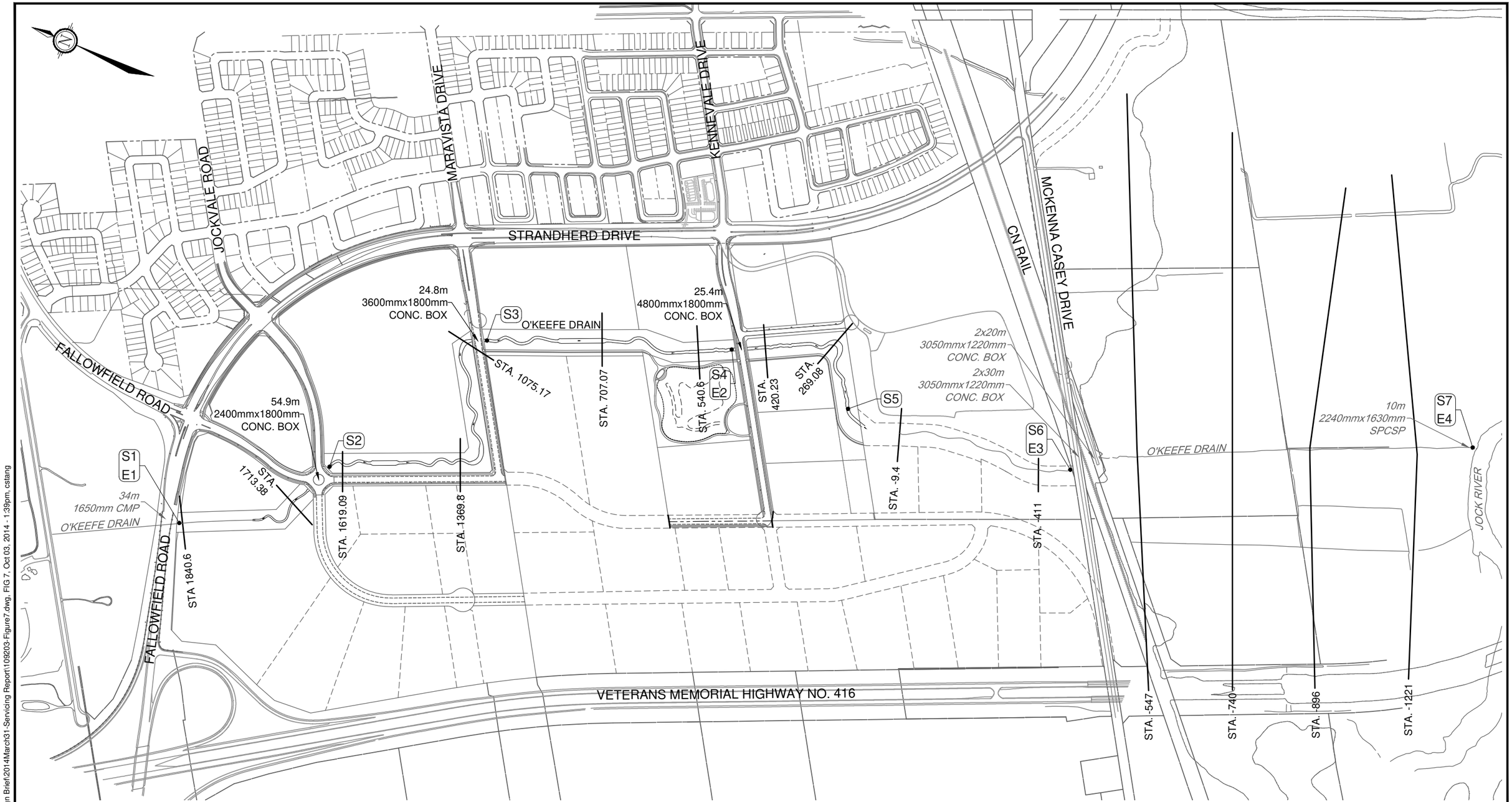
Site-specific SWM reports will be required as part of the site plan application and detailed design of each individual site to demonstrate that the design adheres to the release rates listed in **Table 8.13**. Storage requirements will vary based on the imperviousness of each site. The allowable release rates for each Block are summarized in **Table 8.14**.

Table 8.14: Allowable Release Rates for Areas East of the O'Keefe drain

Block	Area (ha)	Allowable Release Rate (L/s)					
		2yr	5yr	10yr	25yr	50yr	100yr
Block 16	2.50	50	88	113	160	188	315
Block 1	3.51	70	123	158	225	263	442
Block 2	12.04	241	421	542	771	903	1,517
Block 3	5.30	106	186	239	339	398	668
Block 4	3.41	68	119	153	218	256	430
Blocks 5 & 6	3.49	70	122	157	223	262	440

Temperature Mitigation

Best-management practices for temperature mitigation are encouraged for development on the east side of the O'Keefe Drain. Examples of suitable BMPs are provided in **Section 9.2.5**.



LEGEND

S1 / E1 — HYDROLOGIC MODELING (SWMHYMO) ANALYSIS POINT / ENVIRONMENTAL MANAGEMENT PLAN (EMP) ANALYSIS POINT

STA.1840.6 — CROSS SECTION AND STATION

NOVATECH
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CITI GATE 416 EMPLOYMENT LANDS

Post-Development Conditions Hydraulic Model Cross-Section Locations

SCALE 1:7500

DATE SEP 2014 | JOB 109203 | FIGURE FIGURE 7

SHT11X17.DWG - 279mmX432mm

M:\2009\109203\Citi Gate\CAD\Design\Figures\Design Brief\2014March31-Servicing Report\109203-Figure7.dwg, FIG 7, Oct 03, 2014 - 1:39pm, cstang

HEC-RAS Summary Output
Proposed Conditions

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Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)
Proposed Channel	1840.38	100-yr 12hr SCS	7.16	97.42	98.25	1.95	7.36	27.91
Proposed Channel	615.6	100-yr 12hr SCS	10.46	92.42	93.88	0.73	20.99	30.58
Proposed Channel	615.6	50-yr 12hr SCS	8.77	92.42	93.78	0.7	17.96	29.97
Proposed Channel	615.6	25-yr 12hr SCS	7.49	92.42	93.69	0.7	15.28	29.42
Proposed Channel	615.6	10-yr 12hr SCS	5.39	92.42	93.54	0.68	10.89	28.48
Proposed Channel	615.6	5-yr 12hr SCS	4.09	92.42	93.42	0.66	7.74	25.55
Proposed Channel	615.6	2-yr 12hr SCS	2.40	92.42	93.23	0.64	3.86	12.66
Proposed Channel	615.6	25mm 6hr SCS	1.04	92.42	92.95	0.57	1.81	5.5
Proposed Channel	590.6	100-yr 12hr SCS	10.46	92.36	93.83	1.02	16.83	23.28
Proposed Channel	590.6	50-yr 12hr SCS	8.77	92.36	93.73	0.98	14.5	22.67
Proposed Channel	590.6	25-yr 12hr SCS	7.49	92.36	93.63	0.97	12.4	22.1
Proposed Channel	590.6	10-yr 12hr SCS	5.39	92.36	93.48	0.93	8.96	21.14
Proposed Channel	590.6	5-yr 12hr SCS	4.09	92.36	93.35	0.93	6.34	20.38
Proposed Channel	590.6	2-yr 12hr SCS	2.40	92.36	93.13	0.88	2.76	7.14
Proposed Channel	590.6	25mm 6hr SCS	1.04	92.36	92.87	0.68	1.54	4.03
Proposed Channel	585.6		Inl Struct					
Proposed Channel	540.6	100-yr 12hr SCS	10.46	92.27	93.81	1.08	14.66	21.81
Proposed Channel	540.6	50-yr 12hr SCS	8.77	92.27	93.71	1.04	12.46	21.19
Proposed Channel	540.6	25-yr 12hr SCS	7.49	92.27	93.62	1.03	10.55	20.65
Proposed Channel	540.6	10-yr 12hr SCS	5.39	92.27	93.46	0.96	7.4	19.71
Proposed Channel	540.6	5-yr 12hr SCS	4.09	92.27	93.34	0.92	5.05	16.95
Proposed Channel	540.6	2-yr 12hr SCS	2.40	92.27	93.11	0.77	3.1	5.37
Proposed Channel	540.6	25mm 6hr SCS	1.04	92.27	92.82	0.61	1.72	4.21
Proposed Channel	535.6		Inl Struct					
Proposed Channel	497.42	100-yr 12hr SCS	10.46	92.23	93.81	1.03	15.38	21.87
Proposed Channel	497.42	50-yr 12hr SCS	8.77	92.23	93.70	0.99	13.16	21.25
Proposed Channel	497.42	25-yr 12hr SCS	7.49	92.23	93.61	0.97	11.23	20.7
Proposed Channel	497.42	10-yr 12hr SCS	5.39	92.23	93.46	0.91	8.06	19.76
Proposed Channel	497.42	5-yr 12hr SCS	4.09	92.23	93.33	0.87	5.6	18.32
Proposed Channel	497.42	2-yr 12hr SCS	2.40	92.23	93.10	0.74	3.25	5.48
Proposed Channel	497.42	25mm 6hr SCS	1.04	92.23	92.81	0.56	1.84	4.33
Proposed Channel	490.6	100-yr 12hr SCS	10.46	92.22	93.79	1.06	14.62	20.58
Proposed Channel	490.6	50-yr 12hr SCS	8.77	92.22	93.69	1.02	12.53	19.96
Proposed Channel	490.6	25-yr 12hr SCS	7.49	92.22	93.60	1	10.72	19.41
Proposed Channel	490.6	10-yr 12hr SCS	5.39	92.22	93.44	0.92	7.77	18.36
Proposed Channel	490.6	5-yr 12hr SCS	4.09	92.22	93.31	0.88	5.47	17.43
Proposed Channel	490.6	2-yr 12hr SCS	2.40	92.22	93.08	0.75	3.2	5.44
Proposed Channel	490.6	25mm 6hr SCS	1.04	92.22	92.80	0.57	1.82	4.3
Proposed Channel	485.6		Culvert					
Proposed Channel	457.6	100-yr 12hr SCS	10.46	92.19	93.76	1.03	15.96	24.11
Proposed Channel	457.6	50-yr 12hr SCS	8.77	92.19	93.67	0.98	13.83	23.59
Proposed Channel	457.6	25-yr 12hr SCS	7.49	92.19	93.59	0.94	12.04	23.13
Proposed Channel	457.6	10-yr 12hr SCS	5.39	92.19	93.44	0.87	8.59	22.22
Proposed Channel	457.6	5-yr 12hr SCS	4.09	92.19	93.32	0.83	5.97	17.92
Proposed Channel	457.6	2-yr 12hr SCS	2.40	92.19	93.08	0.71	3.4	5.59
Proposed Channel	457.6	25mm 6hr SCS	1.04	92.19	92.80	0.53	1.97	4.45
Proposed Channel	451.71	100-yr 12hr SCS	10.46	92.18	93.75	1.01	15.96	24.24
Proposed Channel	451.71	50-yr 12hr SCS	8.77	92.18	93.66	0.96	13.82	23.7
Proposed Channel	451.71	25-yr 12hr SCS	7.49	92.18	93.58	0.93	12.01	23.24
Proposed Channel	451.71	10-yr 12hr SCS	5.39	92.18	93.43	0.87	8.53	22.32
Proposed Channel	451.71	5-yr 12hr SCS	4.09	92.18	93.30	0.83	5.88	17.78
Proposed Channel	451.71	2-yr 12hr SCS	2.40	92.18	93.07	0.72	3.35	5.55
Proposed Channel	451.71	25mm 6hr SCS	1.04	92.18	92.79	0.53	1.95	4.43
Proposed Channel	420.23	100-yr 12hr SCS	12.71	92.15	93.64	1.37	14.48	24.5
Proposed Channel	420.23	50-yr 12hr SCS	10.55	92.15	93.56	1.3	12.36	23.97
Proposed Channel	420.23	25-yr 12hr SCS	8.88	92.15	93.48	1.25	10.55	23.51
Proposed Channel	420.23	10-yr 12hr SCS	6.15	92.15	93.33	1.14	7.03	21.56
Proposed Channel	420.23	5-yr 12hr SCS	4.49	92.15	93.20	1.03	4.77	14.86
Proposed Channel	420.23	2-yr 12hr SCS	2.60	92.15	92.98	0.86	3.01	5.31
Proposed Channel	420.23	25mm 6hr SCS	1.18	92.15	92.71	0.68	1.72	4.22
Proposed Channel	410.23		Inl Struct					
Proposed Channel	340.6	100-yr 12hr SCS	12.71	92.07	93.64	1.19	17.38	27.04
Proposed Channel	340.6	50-yr 12hr SCS	10.55	92.07	93.55	1.13	15.04	26.52
Proposed Channel	340.6	25-yr 12hr SCS	8.88	92.07	93.48	1.07	13.03	26.06
Proposed Channel	340.6	10-yr 12hr SCS	6.15	92.07	93.32	0.98	9.1	25.14
Proposed Channel	340.6	5-yr 12hr SCS	4.49	92.07	93.19	0.91	6.1	19.96
Proposed Channel	340.6	2-yr 12hr SCS	2.60	92.07	92.96	0.77	3.36	5.56
Proposed Channel	340.6	25mm 6hr SCS	1.18	92.07	92.66	0.62	1.89	4.37
Proposed Channel	288.36	100-yr 12hr SCS	12.71	92.02	93.60	0.76	25.19	36.41
Proposed Channel	288.36	50-yr 12hr SCS	10.55	92.02	93.51	0.71	22.1	35.9
Proposed Channel	288.36	25-yr 12hr SCS	8.88	92.02	93.44	0.66	19.44	35.45
Proposed Channel	288.36	10-yr 12hr SCS	6.15	92.02	93.29	0.57	14.27	32.94
Proposed Channel	288.36	5-yr 12hr SCS	4.49	92.02	93.16	0.51	10.37	27.56
Proposed Channel	288.36	2-yr 12hr SCS	2.60	92.02	92.92	0.42	6.24	9.4
Proposed Channel	288.36	25mm 6hr SCS	1.18	92.02	92.63	0.31	3.75	7.45

CitiGate - *'Block 3'* (125050)
PCSWMM Model Results (HGL)

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MH ID	Obvert Elevation (m)	T/G Elevation (m)	HGL Elevation[1] (m)	Surcharge (m)	Clearance from T/G (m)	HGL in Stress Test[1] (m)
MH218	94.48	96.36	94.23	0.00	2.13	94.23
MH238	94.38	96.43	94.11	0.00	2.32	94.13
MH242	94.27	96.76	94.01	0.00	2.75	94.03
MH278	94.26	96.3	93.95	0.00	1.88	93.97
MH282	94.53	96.17	94.29	0.00	3.01	94.29
MH284	94.53	97.28	94.27	0.00	2.55	94.28
MH416	94.39	96.57	94.02	0.00	1.86	94.04
MH422	94.66	96.3	94.44	0.00	2.44	94.45
MH462	94.49	96.51	94.07	0.00	2.35	94.09
MH468	94.57	96.61	94.26	0.00	0.00	94.28

[1] *6-hour Chicago Storm.*

CitiGate - *'Block 3'* (125050)
PCSWMM Model Results (Ponding)

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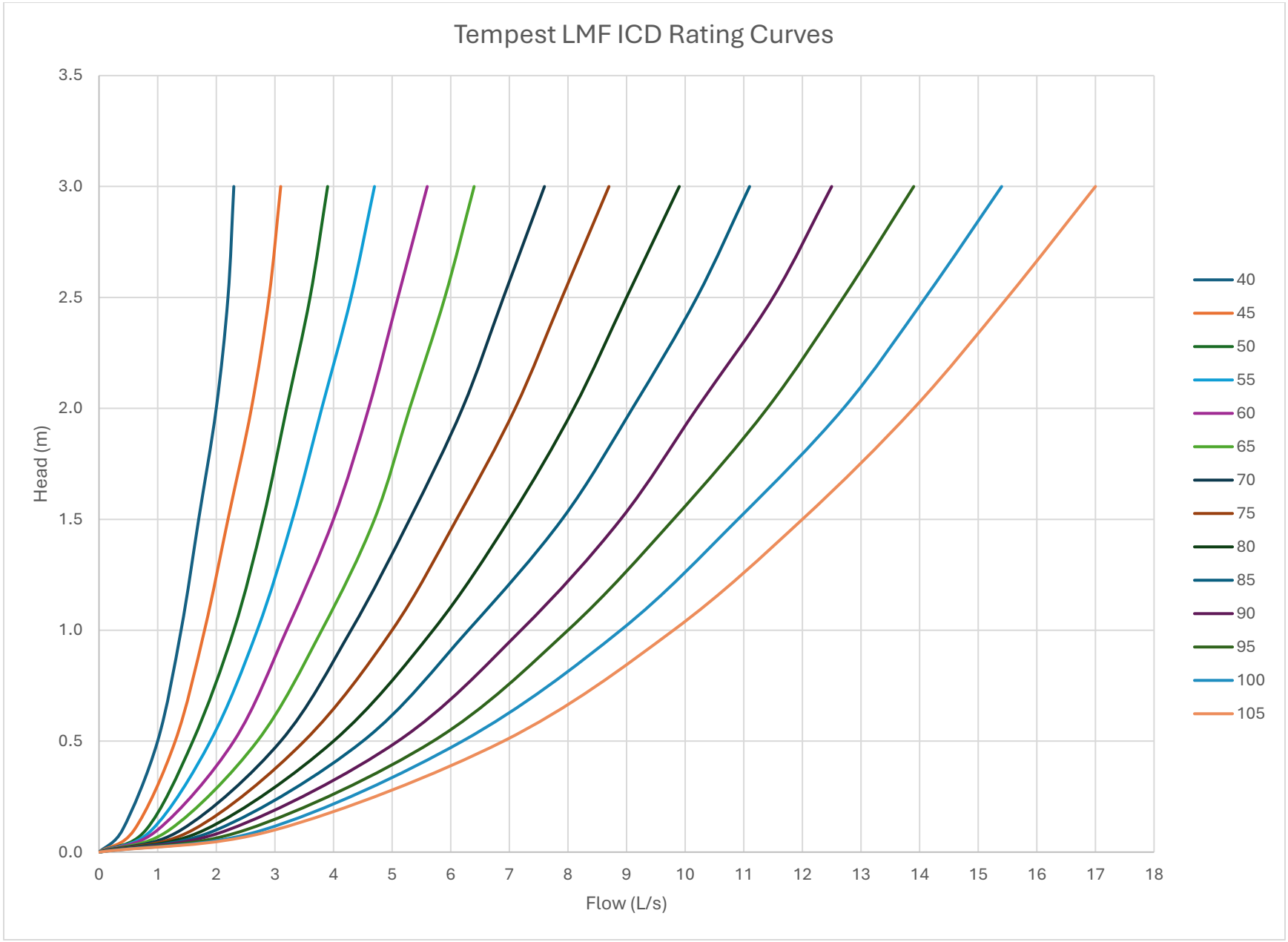
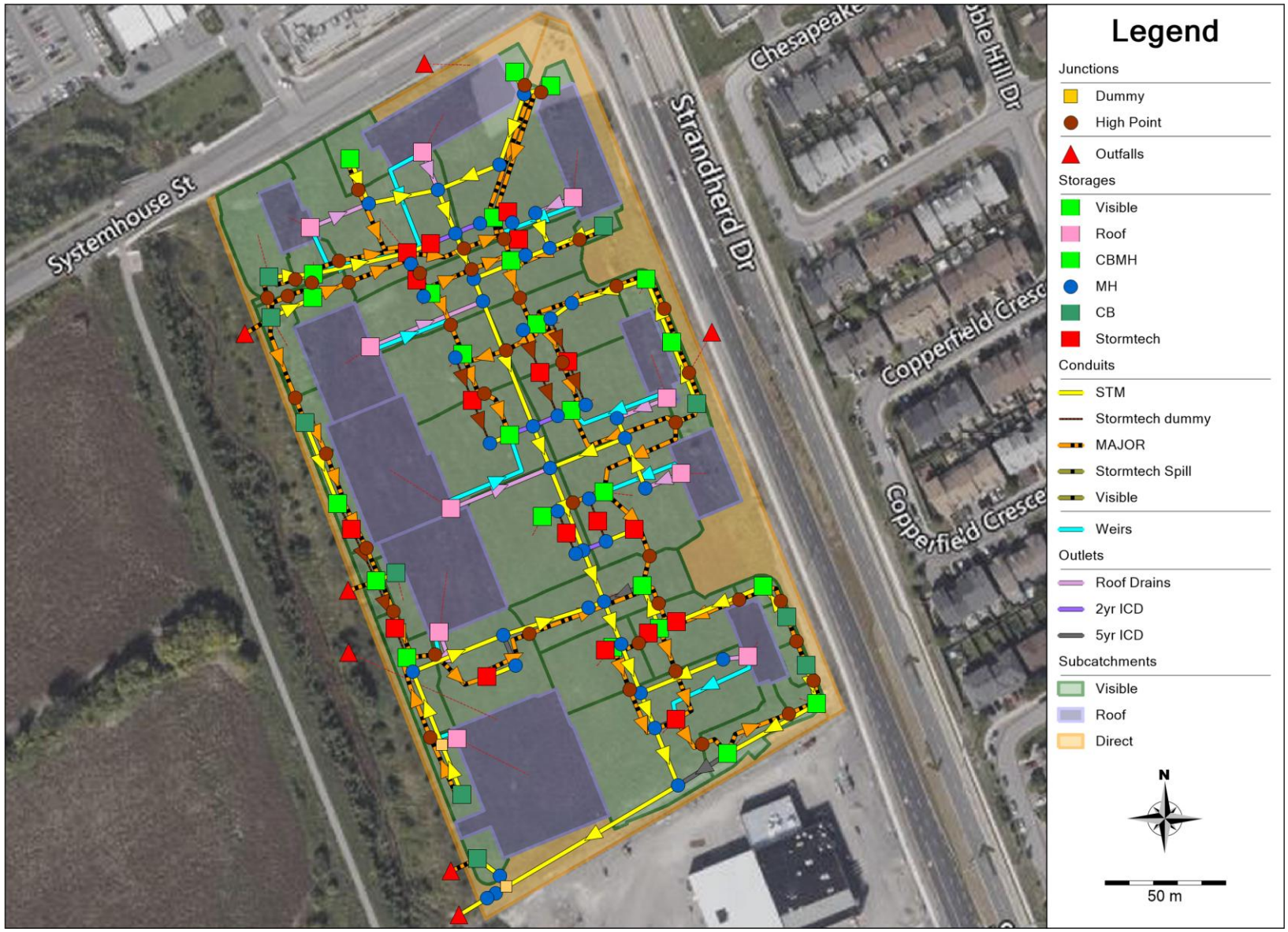
CB ID	Invert Elev. (m)	Rim Elev. (m)	Spill Elev. (m)	Ponding Depth (m)	HGL Elev. (m)[1]				Ponding Depth (m)				Spill Depth (m)			
					2-yr	5-yr	100-yr	100-yr (+20%)	2-yr	5-yr	100-yr	100-yr (+20%)	2-yr	5-yr	100-yr	100-yr (+20%)
CB202	97.35	96.35	96.63	0.28	93.98	94.01	94.04	94.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB210	97.28	96.28	96.32	0.04	94.70	95.04	96.09	96.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB238	97.28	96.28	96.32	0.04	94.73	94.94	95.67	96.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB250	96.52	95.52	96.50	0.98	94.43	94.44	94.47	94.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB256	96.50	95.50	96.10	0.60	95.02	95.03	95.83	96.34	0.00	0.00	0.33	0.84	0.00	0.00	0.00	0.24
CB260	97.45	96.45	96.65	0.20	94.96	94.97	95.83	96.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB406	97.26	96.26	96.40	0.14	94.96	94.98	95.22	96.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB424	97.36	96.36	96.45	0.09	94.42	94.43	94.44	94.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CB458	97.28	96.28	96.45	0.17	94.99	95.12	96.06	96.30	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
CB460	97.35	96.35	96.43	0.08	94.92	95.12	96.06	96.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH206	96.95	95.95	96.25	0.30	94.70	95.04	96.09	96.20	0.00	0.00	0.14	0.25	0.00	0.00	0.00	0.00
CBMH208	97.20	96.20	96.32	0.12	94.70	95.04	96.09	96.21	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
CBMH214/ST17	96.95	95.95	96.25	0.30	94.68	94.99	96.16	96.23	0.00	0.00	0.21	0.28	0.00	0.00	0.00	0.00
CBMH222	97.00	96.00	96.22	0.22	94.77	95.08	96.17	96.22	0.00	0.00	0.17	0.22	0.00	0.00	0.00	0.00
CBMH228	97.00	96.00	96.20	0.20	94.73	94.94	95.67	96.18	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
CBMH230	97.00	96.00	96.20	0.20	94.73	94.94	95.67	96.18	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
CBMH236	97.25	96.25	96.32	0.07	94.73	94.94	95.67	96.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH246/ST18	97.30	96.30	96.43	0.13	94.76	94.97	95.71	96.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH252	97.15	96.15	96.43	0.28	94.72	94.89	95.83	96.34	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
CBMH254	97.30	96.30	96.5	0.20	94.72	94.89	95.83	96.34	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
CBMH258	97.45	96.45	96.65	0.20	94.72	94.89	95.83	96.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH268	96.95	95.95	96.15	0.20	94.98	95.05	96.14	96.20	0.00	0.00	0.19	0.25	0.00	0.00	0.00	0.05
CBMH276	96.95	95.95	96.15	0.20	94.47	94.62	95.06	96.20	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.05
CBMH292	97.05	96.05	96.27	0.22	94.63	94.79	95.22	96.13	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
CBMH294	97.00	96.00	96.35	0.35	94.63	94.79	95.22	96.13	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
CBMH402	97.25	96.25	96.40	0.15	94.65	94.79	95.22	96.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH404	97.35	96.35	96.41	0.06	94.84	94.85	95.22	96.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH408	97.00	96.00	96.35	0.35	94.60	94.74	95.14	96.16	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
CBMH414	97.05	96.05	96.30	0.25	94.60	94.74	95.14	96.16	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
CBMH430	97.05	96.05	96.30	0.25	94.92	95.09	95.87	96.23	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00
CBMH438	97.00	96.00	96.27	0.27	94.92	95.09	95.87	96.23	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00
CBMH444/ST2	97.05	96.05	96.25	0.20	94.92	95.12	96.06	96.30	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.05
CBMH450	97.00	96.00	96.25	0.25	94.92	95.12	96.06	96.30	0.00	0.00	0.06	0.30	0.00	0.00	0.00	0.05
CBMH454	97.30	96.30	96.43	0.13	94.92	95.12	96.06	96.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH456	97.30	96.30	96.45	0.15	94.92	95.12	96.06	96.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CBMH470	97.45	96.45	96.6	0.15	94.41	94.43	94.49	94.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CitiGate - 'Block 3' (125050)
Tempest ICD Curves



Overall Model Schematic



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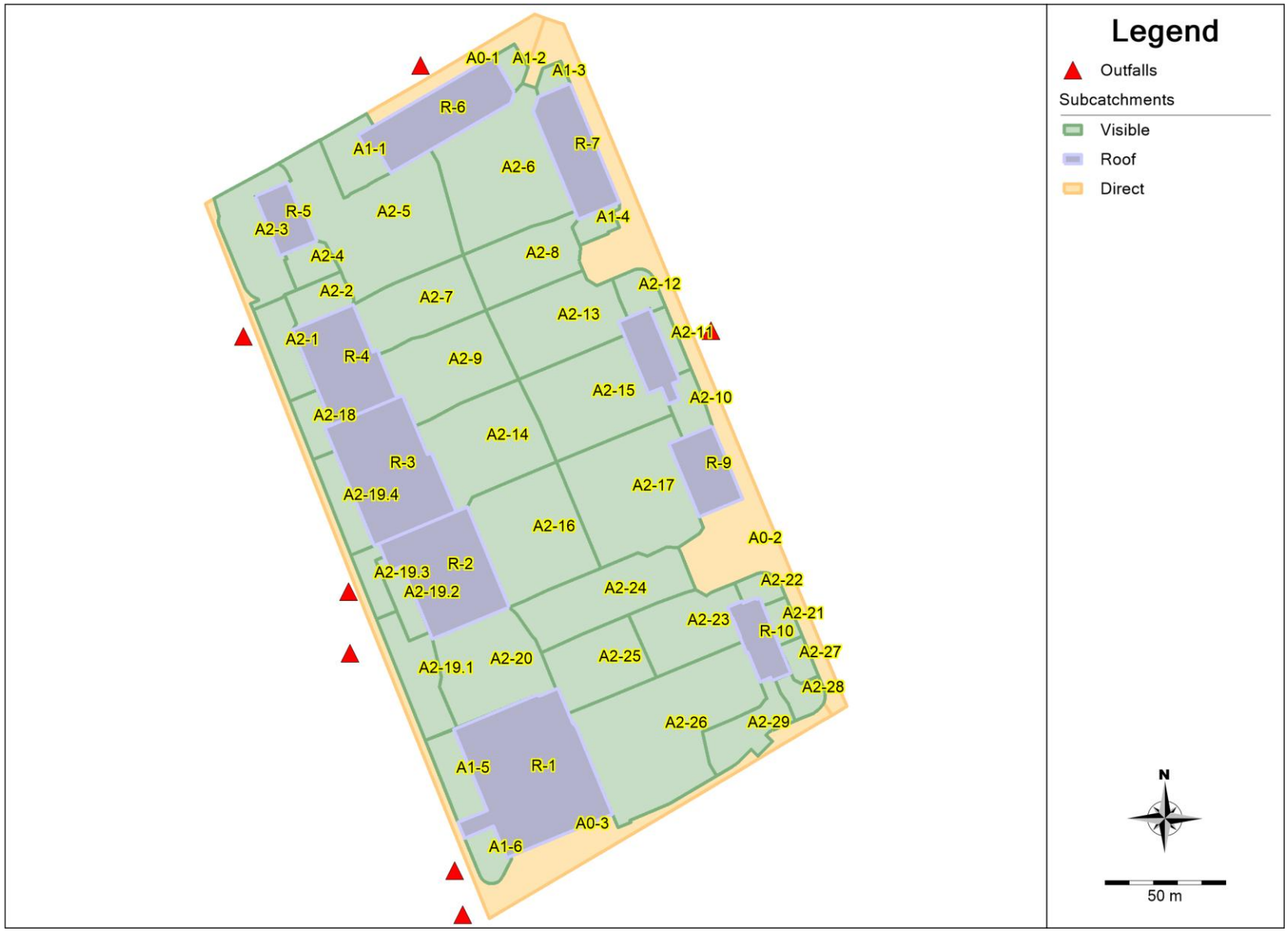
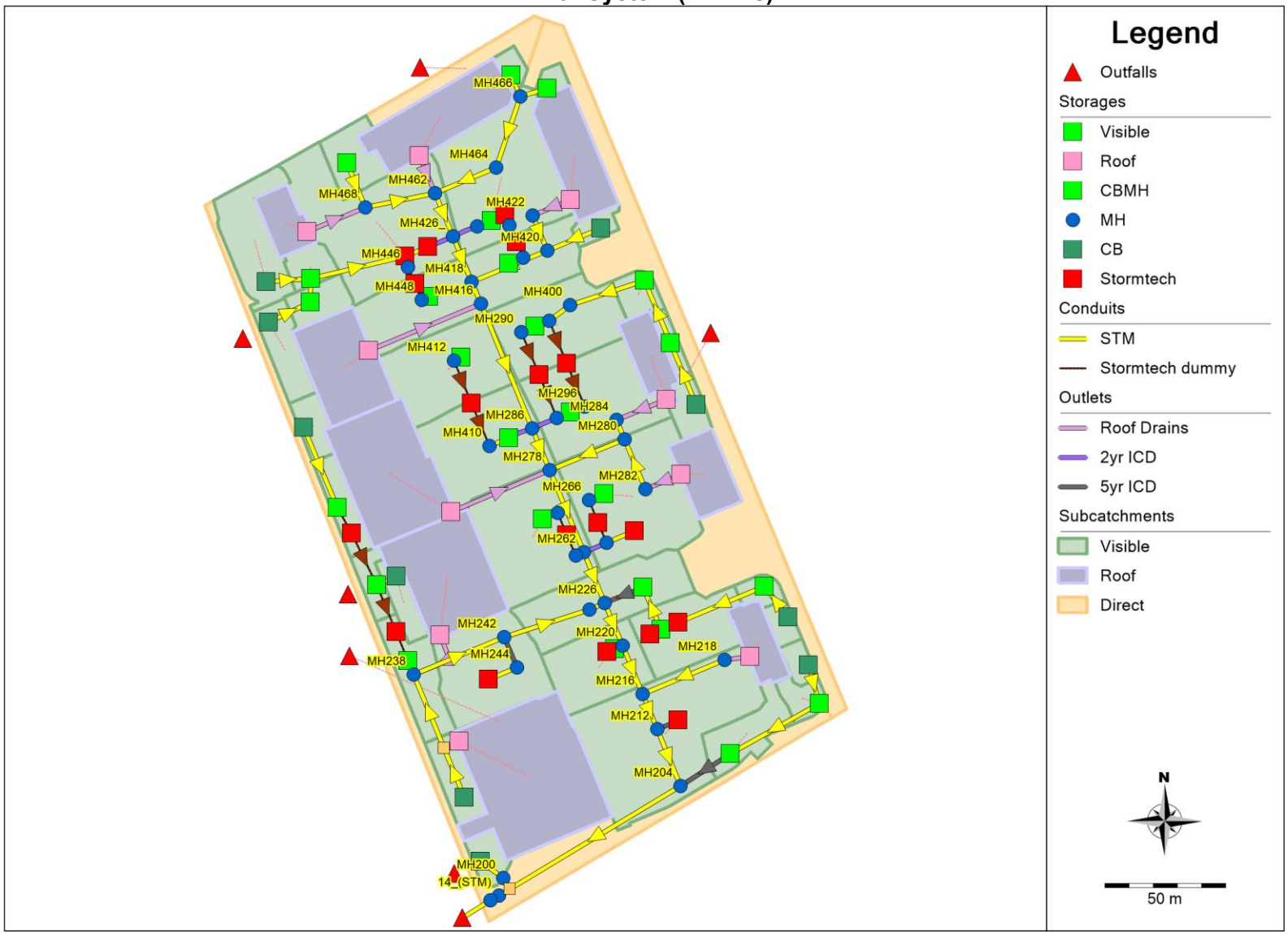
Subcatchments



Minor System (MH IDs)



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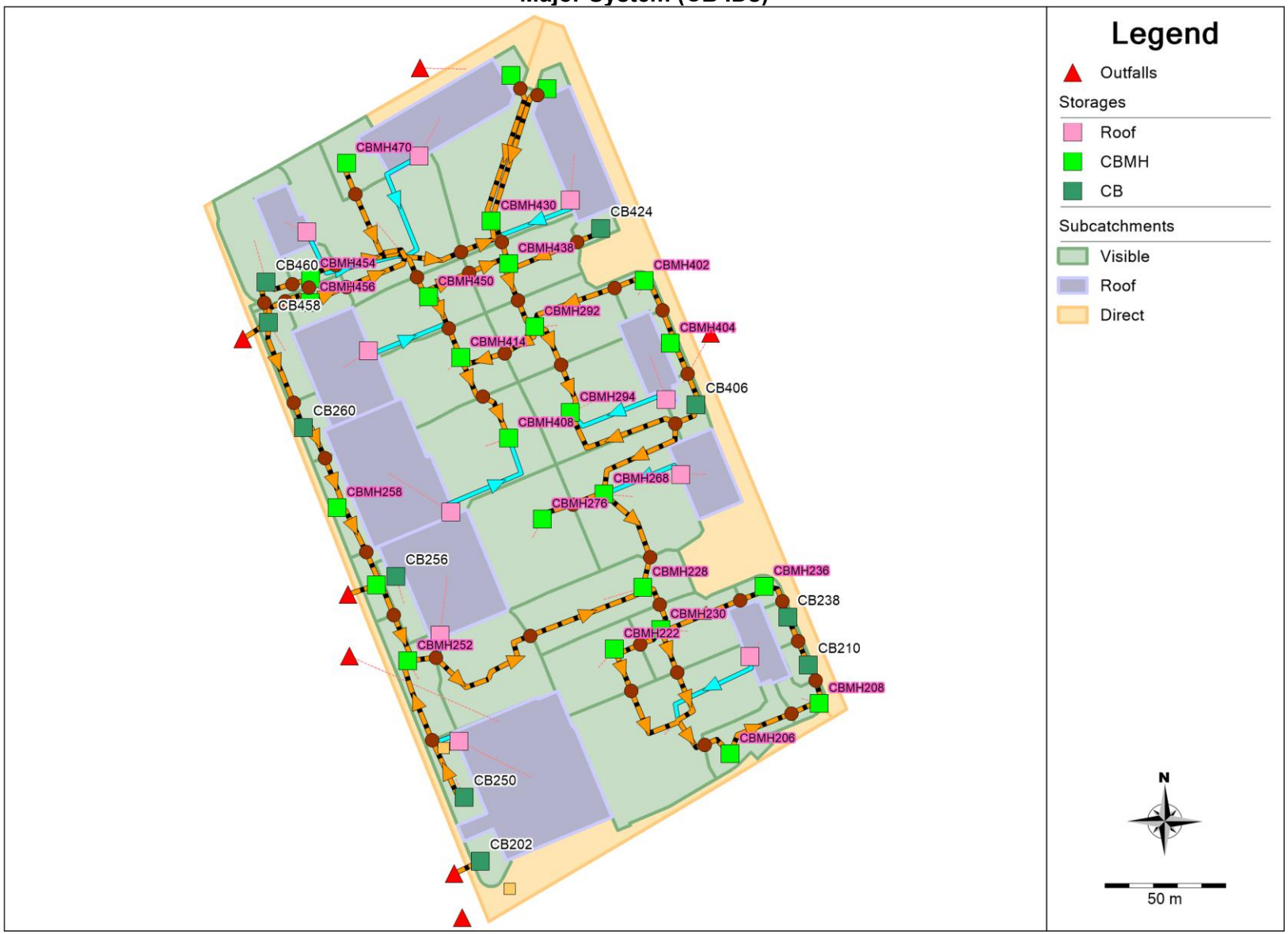
Major System (CB IDs)



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  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
  ------------------------------------------------------------

  Boundary Conditions:
  100-yr = 93.88m
  25-yr = 93.69m
  WARNING 03: negative offset ignored for Link MAJ-CBMH454(3)
  WARNING 03: negative offset ignored for Link MAJ-CBMH454(4)
  WARNING 04: minimum elevation drop used for Conduit STM-106_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-106_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-115_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-115_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-118_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-118_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-124_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-124_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-141_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-141_(STM)_2
  WARNING 03: negative offset ignored for Link STM-55_(STM)
  WARNING 04: minimum elevation drop used for Conduit STM-88_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-88_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-89_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-89_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-96_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-96_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-99_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-99_(STM)_2

  *************
  Element Count
  *************
  Number of rain gages ...... 1
  Number of subcatchments ... 51
  Number of nodes ........... 158
  Number of links ........... 207
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ---------------------------------------------------------------------
  Raingage             1-C6-100                     INTENSITY   10 min.


  ********************
  Subcatchment Summary
  ********************
  Name                        Area     Width   %Imperv    %Slope Rain Gage
Outlet
  ------------------------------------------------------------------------------
--------------------------
  A0-1                        0.06    101.27     23.00   15.0000 Raingage
OF-Systemhouse
```

A0-2	0.36	122.48	41.00	2.5000	Raingage
OF-Strandherd					
A0-3	0.22	63.56	0.00	15.0000	Raingage
MAJ-MD					
A1-1	0.05	40.59	51.00	1.2500	Raingage
CBMH470					
A1-2	0.01	16.62	100.00	0.5000	Raingage
PD1					
A1-3	0.01	19.05	100.00	0.5000	Raingage
PD2					
A1-4	0.02	16.30	100.00	1.0000	Raingage
CB424					
A1-5	0.05	17.48	100.00	2.0000	Raingage
CB250					
A1-6	0.03	32.95	0.00	3.0000	Raingage
CB202					
A2-1	0.05	24.24	97.00	1.5000	Raingage
CB458					
A2-10	0.03	26.06	73.00	1.5000	Raingage
CB406					
A2-11	0.02	12.36	100.00	1.0000	Raingage
CBMH404					
A2-12	0.03	21.29	77.00	1.0000	Raingage
CBMH402					
A2-13	0.15	60.58	87.00	1.5000	Raingage
CBMH292					
A2-14	0.17	65.66	96.00	1.7500	Raingage
CBMH408					
A2-15	0.18	78.91	96.00	1.5000	Raingage
CBMH294					
A2-16	0.19	72.06	93.00	1.5000	Raingage
CBMH276					
A2-17	0.23	97.92	93.00	1.5000	Raingage
CBMH268					
A2-18	0.03	29.77	100.00	1.5000	Raingage
CB260					
A2-19.1	0.07	28.09	100.00	2.5000	Raingage
CBMH252					
A2-19.2	0.03	11.19	100.00	2.5000	Raingage
CB256					
A2-19.3	0.03	20.12	100.00	2.5000	Raingage
CBMH254					
A2-19.4	0.04	20.73	100.00	2.5000	Raingage
CBMH258					
A2-2	0.04	29.82	71.00	1.5000	Raingage
CBMH456					
A2-20	0.16	78.97	94.00	1.0000	Raingage
CBMH246/ST18					
A2-21	0.02	31.36	79.00	1.0000	Raingage
CB238					
A2-22	0.02	22.12	93.00	1.5000	Raingage
CBMH236					
A2-23	0.11	49.89	96.00	1.5000	Raingage
CBMH230					
A2-24	0.15	46.10	79.00	1.5000	Raingage
CBMH228					
A2-25	0.11	48.37	96.00	1.5000	Raingage
CBMH222					
A2-26	0.31	75.92	97.00	1.5000	Raingage
CBMH214/ST17					

A2-27	0.02	20.86	80.00	1.0000	Raingage
CB210					
A2-28	0.02	23.03	84.00	1.5000	Raingage
CBMH208					
A2-29	0.06	65.11	79.00	2.0000	Raingage
CBMH206					
A2-3	0.10	32.88	63.00	1.5000	Raingage
CB460					
A2-4	0.03	27.54	97.00	1.5000	Raingage
CBMH454					
A2-5	0.27	61.28	94.00	1.5000	Raingage
CBMH444/ST2					
A2-6	0.23	74.98	97.00	1.5000	Raingage
CBMH430					
A2-7	0.12	49.84	87.00	1.5000	Raingage
CBMH450					
A2-8	0.11	38.54	86.00	1.5000	Raingage
CBMH438					
A2-9	0.15	64.30	87.00	1.5000	Raingage
CBMH414					
R-1	0.28	278.00	100.00	1.5000	Raingage
R1_S					
R-10	0.04	45.00	100.00	1.5000	Raingage
R10_S					
R-2	0.16	159.00	100.00	1.5000	Raingage
R2_S					
R-3	0.19	188.00	100.00	1.5000	Raingage
R3_S					
R-4	0.12	119.00	100.00	1.5000	Raingage
R4_S					
R-5	0.04	42.00	100.00	1.5000	Raingage
R5_S					
R-6	0.13	126.00	100.00	1.5000	Raingage
R6_S					
R-7	0.10	96.00	100.00	1.5000	Raingage
R7_S					
R-8	0.05	48.00	100.00	1.5000	Raingage
R8_S					
R-9	0.06	63.00	100.00	1.5000	Raingage
R9_S					

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
HP-A1-1	JUNCTION	96.60	1.00	0.0	
HP-A1-2	JUNCTION	96.85	1.00	0.0	
HP-A1-3	JUNCTION	96.75	1.00	0.0	
HP-A1-4	JUNCTION	96.45	1.00	0.0	
HP-A1-5	JUNCTION	96.50	1.00	0.0	
HP-A2-1	JUNCTION	96.65	1.00	0.0	
HP-A2-10(1)	JUNCTION	96.41	1.00	0.0	
HP-A2-10(2)	JUNCTION	96.40	1.00	0.0	
HP-A2-11	JUNCTION	96.42	1.00	0.0	
HP-A2-12	JUNCTION	96.40	1.00	0.0	
HP-A2-13(1)	JUNCTION	96.30	1.00	0.0	

HP-A2-13(2)	JUNCTION	96.35	1.00	0.0
HP-A2-16	JUNCTION	96.15	1.00	0.0
HP-A2-17	JUNCTION	96.20	1.00	0.0
HP-A2-18	JUNCTION	96.65	1.00	0.0
HP-A2-19.1	JUNCTION	96.43	1.00	0.0
HP-A2-19.3	JUNCTION	96.50	1.00	0.0
HP-A2-19.4	JUNCTION	96.65	1.00	0.0
HP-A2-2(1)	JUNCTION	96.45	1.00	0.0
HP-A2-2(2)	JUNCTION	96.50	1.00	0.0
HP-A2-20	JUNCTION	96.50	1.00	0.0
HP-A2-21	JUNCTION	96.32	1.00	0.0
HP-A2-22	JUNCTION	96.37	1.00	0.0
HP-A2-23	JUNCTION	96.30	1.00	0.0
HP-A2-24	JUNCTION	96.20	1.00	0.0
HP-A2-25	JUNCTION	96.35	1.00	0.0
HP-A2-25(2)	JUNCTION	96.22	1.00	0.0
HP-A2-26	JUNCTION	96.25	1.00	0.0
HP-A2-27	JUNCTION	96.40	1.00	0.0
HP-A2-28	JUNCTION	96.32	1.00	0.0
HP-A2-29	JUNCTION	96.45	1.00	0.0
HP-A2-3(1)	JUNCTION	96.43	1.00	0.0
HP-A2-3(2)	JUNCTION	96.45	1.00	0.0
HP-A2-4(1)	JUNCTION	96.50	1.00	0.0
HP-A2-4(2)	JUNCTION	96.55	1.00	0.0
HP-A2-5(1)	JUNCTION	96.35	1.00	0.0
HP-A2-5(2)	JUNCTION	96.25	1.00	0.0
HP-A2-6	JUNCTION	96.30	1.00	0.0
HP-A2-7(1)	JUNCTION	96.30	1.00	0.0
HP-A2-7(2)	JUNCTION	96.38	1.00	0.0
HP-A2-8	JUNCTION	96.27	1.00	0.0
HP-A2-9	JUNCTION	96.35	1.00	0.0
HP-MD1	OUTFALL	96.43	1.00	0.0
MAJ-MD	OUTFALL	96.43	0.00	0.0
MAJ-MD2	OUTFALL	96.41	1.00	0.0
MAJ-MD3	OUTFALL	96.63	1.00	0.0
MIN_MD	OUTFALL	93.00	0.86	0.0
OF-Strandherd	OUTFALL	95.49	0.00	0.0
OF-Systemhouse	OUTFALL	95.88	0.00	0.0
14_(STM)	STORAGE	93.09	2.37	0.0
15_(STM)	STORAGE	93.03	2.34	0.0
CB202	STORAGE	93.97	3.38	0.0
CB210	STORAGE	94.40	2.88	0.0
CB238	STORAGE	94.68	2.60	0.0
CB250	STORAGE	94.35	2.17	0.0
CB256	STORAGE	94.96	1.54	0.0
CB260	STORAGE	94.90	2.55	0.0
CB406	STORAGE	94.91	2.35	0.0
CB424	STORAGE	94.37	2.99	0.0
CB458	STORAGE	94.90	2.38	0.0
CB460	STORAGE	94.73	2.62	0.0
CBMH206	STORAGE	93.98	2.97	0.0
CBMH208	STORAGE	94.19	3.01	0.0
CBMH214/ST17	STORAGE	93.84	3.11	0.0
CBMH222	STORAGE	93.74	3.26	0.0
CBMH228	STORAGE	93.94	3.06	0.0
CBMH230	STORAGE	94.14	2.86	0.0
CBMH236	STORAGE	94.44	2.81	0.0

CBMH246/ST18	STORAGE	94.10	3.20	0.0
CBMH252	STORAGE	94.11	3.04	0.0
CBMH254	STORAGE	94.27	3.03	0.0
CBMH258	STORAGE	94.27	3.18	0.0
CBMH268	STORAGE	94.74	2.21	0.0
CBMH276	STORAGE	94.25	2.70	0.0
CBMH292	STORAGE	94.10	2.95	0.0
CBMH294	STORAGE	94.23	2.77	0.0
CBMH402	STORAGE	94.56	2.69	0.0
CBMH404	STORAGE	94.76	2.59	0.0
CBMH408	STORAGE	94.05	2.95	0.0
CBMH414	STORAGE	94.42	2.63	0.0
CBMH430	STORAGE	94.39	2.66	0.0
CBMH438	STORAGE	94.68	2.32	0.0
CBMH444/ST2	STORAGE	94.35	2.70	0.0
CBMH450	STORAGE	94.67	2.33	0.0
CBMH454	STORAGE	94.63	2.67	0.0
CBMH456	STORAGE	94.74	2.56	0.0
CBMH470	STORAGE	94.34	3.11	0.0
MH200	STORAGE	93.70	3.03	0.0
MH200_Dummy	STORAGE	93.14	2.77	0.0
MH204	STORAGE	93.21	3.15	0.0
MH212	STORAGE	93.34	2.75	0.0
MH216	STORAGE	93.36	3.01	0.0
MH218	STORAGE	94.18	2.18	0.0
MH220	STORAGE	93.39	2.61	0.0
MH224/ST14	STORAGE	93.90	2.30	0.0
MH226	STORAGE	93.42	2.80	0.0
MH232/ST15	STORAGE	94.10	1.90	0.0
MH234/ST16	STORAGE	94.10	2.08	0.0
MH238	STORAGE	93.93	2.50	0.0
MH240	STORAGE	93.72	2.59	0.0
MH242	STORAGE	93.82	2.94	0.0
MH244	STORAGE	94.04	2.74	0.0
MH262	STORAGE	93.59	2.67	0.0
MH264	STORAGE	93.95	2.28	0.0
MH266	STORAGE	94.10	1.95	0.0
MH270/ST13	STORAGE	93.95	2.22	0.0
MH272	STORAGE	93.84	2.46	0.0
MH274	STORAGE	94.07	1.98	0.0
MH278	STORAGE	93.66	2.64	0.0
MH280	STORAGE	94.05	2.23	0.0
MH282	STORAGE	94.23	1.94	0.0
MH284	STORAGE	94.23	2.03	0.0
MH286	STORAGE	93.70	2.45	0.0
MH288	STORAGE	94.06	2.03	0.0
MH290	STORAGE	94.07	2.08	0.0
MH296	STORAGE	94.27	1.81	0.0
MH298	STORAGE	94.27	1.85	0.0
MH400	STORAGE	94.37	1.88	0.0
MH410	STORAGE	94.24	1.90	0.0
MH412	STORAGE	94.24	1.85	0.0
MH416	STORAGE	93.79	2.78	0.0
MH418	STORAGE	93.81	2.50	0.0
MH420	STORAGE	94.24	2.01	0.0
MH422	STORAGE	94.36	1.94	0.0
MH426_	STORAGE	93.85	2.56	0.0

MH428	STORAGE	94.21	1.98	0.0
MH432/ST4	STORAGE	94.30	1.85	0.0
MH434	STORAGE	94.50	1.68	0.0
MH436	STORAGE	94.50	1.61	0.0
MH440/ST3	STORAGE	94.22	2.00	0.0
MH446	STORAGE	94.50	1.66	0.0
MH448	STORAGE	94.50	1.56	0.0
MH462	STORAGE	93.89	2.62	0.0
MH464	STORAGE	94.12	2.29	0.0
MH466	STORAGE	94.38	2.49	0.0
MH468	STORAGE	94.12	2.49	0.0
PD1	STORAGE	94.60	3.20	0.0
PD2	STORAGE	94.65	3.05	0.0
R-1_Dummy	STORAGE	94.24	1.65	0.0
R1_S	STORAGE	98.00	0.50	0.0
R10_S	STORAGE	98.00	0.50	0.0
R2_S	STORAGE	98.00	0.50	0.0
R3_S	STORAGE	98.00	0.50	0.0
R4_S	STORAGE	98.00	0.50	0.0
R5_S	STORAGE	98.00	0.50	0.0
R6_S	STORAGE	98.00	0.50	0.0
R7_S	STORAGE	98.00	0.50	0.0
R8_S	STORAGE	98.00	0.50	0.0
R9_S	STORAGE	98.00	0.50	0.0
ST1	STORAGE	94.35	1.75	0.0
ST10	STORAGE	94.12	2.18	0.0
ST11	STORAGE	93.95	2.20	0.0
ST12	STORAGE	93.95	2.20	0.0
ST5	STORAGE	94.35	1.80	0.0
ST6	STORAGE	94.09	2.01	0.0
ST7	STORAGE	94.05	2.05	0.0
ST8	STORAGE	94.12	1.98	0.0
ST9	STORAGE	94.12	2.28	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	% Slope	Roughness
MAJ-CB210(1)	CB210	HP-A2-27	CONDUIT	2.0	- 6.0108	0.0130
MAJ-CB210(2)	HP-A2-27	CB238	CONDUIT	2.0	6.0108	0.0130
MAJ-CB238(1)	CB238	HP-A2-21	CONDUIT	2.0	- 2.0004	0.0130
MAJ-CB238(2)	HP-A2-21	CBMH236	CONDUIT	2.0	3.5021	0.0130
MAJ-CB250(1)	CB250	HP-A1-5	CONDUIT	2.0	- 56.2106	0.0130
MAJ-CB250(2)	HP-A1-5	CBMH252	CONDUIT	2.0	17.7743	0.0130
MAJ-CB260(1)	CB260	HP-A2-18	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CB260(2)	HP-A2-18	CBMH258	CONDUIT	2.0	10.0504	0.0130

MAJ-CB406(1)	CB406	HP-A2-10(1)	CONDUIT	2.0	-	8.0257 0.0130
MAJ-CB406(2)	HP-A2-10(1)	CBMH404	CONDUIT	2.0		3.0014 0.0130
MAJ-CB406(3)	CB406	HP-A2-10(2)	CONDUIT	2.0	-	7.5212 0.0130
MAJ-CB406(4)	HP-A2-10(2)	CBMH294	CONDUIT	2.0		20.4124 0.0130
MAJ-CB406(5)	HP-A2-10(2)	CBMH268	CONDUIT	2.0		23.0921 0.0130
MAJ-CB424(1)	CB424	HP-A1-4	CONDUIT	2.0	-	4.0032 0.0130
MAJ-CB424(2)	HP-A1-4	CBMH438	CONDUIT	2.0		23.0921 0.0130
MAJ-CB458(1)	CB458	HP-A2-1	CONDUIT	2.0	-	18.8249 0.0130
MAJ-CB458(2)	HP-A2-1	CB260	CONDUIT	2.0		10.0504 0.0130
MAJ-CB460(1)	CB460	HP-A2-3(1)	CONDUIT	2.0	-	4.0032 0.0130
MAJ-CB460(2)	HP-A2-3(1)	CBMH454	CONDUIT	2.0		6.5138 0.0130
MAJ-CB460(3)	CB460	HP-A2-3(2)	CONDUIT	2.0	-	5.0063 0.0130
MAJ-CB460(4)	HP-A2-3(2)	CB458	CONDUIT	2.0		8.5309 0.0130
MAJ-CBMH206(1)	CBMH206	HP-A2-29	CONDUIT	2.0	-	25.8199 0.0130
MAJ-CBMH206(2)	HP-A2-29	CBMH208	CONDUIT	2.0		12.5988 0.0130
MAJ-CBMH208	CBMH208	HP-A2-28	CONDUIT	2.0	-	6.0108 0.0130
MAJ-CBMH208(2)	HP-A2-28	CB210	CONDUIT	2.0		2.0004 0.0130
MAJ-CBMH214(1)	CBMH214/ST17	HP-A2-26	CONDUIT	2.0	-	15.1717 0.0130
MAJ-CBMH214(2)	HP-A2-26	CBMH206	CONDUIT	2.0		15.1717 0.0130
MAJ-CBMH222(1)	CBMH222	HP-A2-25	CONDUIT	2.0	-	17.7743 0.0130
MAJ-CBMH222(2)	HP-A2-25	CBMH214/ST17	CONDUIT	2.0		20.4124 0.0130
MAJ-CBMH222(3)	CBMH222	HP-A2-25(2)	CONDUIT	2.0	-	11.0672 0.0130
MAJ-CBMH222(4)	HP-A2-25(2)	CBMH230	CONDUIT	2.0		11.0672 0.0130
MAJ-CBMH228(1)	CBMH228	HP-A2-24	CONDUIT	2.0	-	10.0504 0.0130
MAJ-CBMH228(2)	HP-A2-24	CBMH230	CONDUIT	2.0		10.0504 0.0130
MAJ-CBMH230(1)	CBMH230	HP-A2-23	CONDUIT	2.0	-	15.1717 0.0130
MAJ-CBMH230(2)	HP-A2-23	CBMH214/ST17	CONDUIT	2.0		17.7743 0.0130
MAJ-CBMH236(1)	CBMH236	HP-A2-22	CONDUIT	2.0	-	6.0108 0.0130
MAJ-CBMH236(2)	HP-A2-22	CBMH230	CONDUIT	2.0		18.8249 0.0130
MAJ-CBMH246(1)	CBMH246/ST18	HP-A2-20	CONDUIT	2.0	-	25.8199 0.0130

MAJ-CBMH246(2)	HP-A2-20	CBMH228	CONDUIT	2.0	25.8199	0.0130
MAJ-CBMH252(1)	CBMH252	HP-A2-19.1	CONDUIT	2.0	- 14.1393	0.0130
MAJ-CBMH252(2)	HP-A2-19.1	CBMH246/ST18	CONDUIT	2.0	22.0148	0.0130
MAJ-CBMH254(1)	CBMH254	HP-A2-19.3	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CBMH254(2)	HP-A2-19.3	CBMH252	CONDUIT	2.0	17.7743	0.0130
MAJ-CBMH258(1)	CBMH258	HP-A2-19.4	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CBMH258(2)	HP-A2-19.4	CBMH254	CONDUIT	2.0	17.7743	0.0130
MAJ-CBMH268(1)	CBMH268	HP-A2-17	CONDUIT	2.0	- 12.5988	0.0130
MAJ-CBMH268(2)	HP-A2-17	CBMH228	CONDUIT	2.0	10.0504	0.0130
MAJ-CBMH276(1)	CBMH276	HP-A2-16	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CBMH276(2)	HP-A2-16	CBMH268	CONDUIT	2.0	10.0504	0.0130
MAJ-CBMH292(1)	CBMH292	HP-A2-13(1)	CONDUIT	2.0	- 12.5988	0.0130
MAJ-CBMH292(2)	HP-A2-13(1)	CBMH414	CONDUIT	2.0	12.5988	0.0130
MAJ-CBMH292(3)	CBMH292	HP-A2-13(2)	CONDUIT	2.0	- 15.1717	0.0130
MAJ-CBMH292(4)	HP-A2-13(2)	CBMH294	CONDUIT	2.0	17.7743	0.0130
MAJ-CBMH402(1)	CBMH402	HP-A2-12	CONDUIT	2.0	- 7.5212	0.0130
MAJ-CBMH402(2)	HP-A2-12	CBMH292	CONDUIT	2.0	17.7743	0.0130
MAJ-CBMH404(1)	CBMH404	HP-A2-11	CONDUIT	2.0	- 3.5021	0.0130
MAJ-CBMH404(2)	HP-A2-11	CBMH402	CONDUIT	2.0	8.5309	0.0130
MAJ-CBMH414(1)	CBMH414	HP-A2-9	CONDUIT	2.0	- 15.1717	0.0130
MAJ-CBMH414(2)	HP-A2-9	CBMH408	CONDUIT	2.0	17.7743	0.0130
MAJ-CBMH430(1)	CBMH430	HP-A2-6	CONDUIT	2.0	- 12.5988	0.0130
MAJ-CBMH430(2)	HP-A2-6	CBMH438	CONDUIT	2.0	15.1717	0.0130
MAJ-CBMH438(1)	CBMH438	HP-A2-8	CONDUIT	2.0	- 13.6247	0.0130
MAJ-CBMH438(2)	HP-A2-8	CBMH292	CONDUIT	2.0	11.0672	0.0130
MAJ-CBMH444(1)	CBMH444/ST2	HP-A2-5(1)	CONDUIT	2.0	- 15.1717	0.0130
MAJ-CBMH444(2)	HP-A2-5(1)	CBMH430	CONDUIT	2.0	15.1717	0.0130
MAJ-CBMH444(3)	CBMH444/ST2	HP-A2-5(2)	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CBMH444(4)	HP-A2-5(2)	CBMH450	CONDUIT	2.0	12.5988	0.0130
MAJ-CBMH450(1)	CBMH450	HP-A2-7(1)	CONDUIT	2.0	- 15.1717	0.0130

MAJ-CBMH450(2)	HP-A2-7(1)	CBMH438	CONDUIT	2.0	15.1717 0.0130
MAJ-CBMH450(3)	CBMH450	HP-A2-7(2)	CONDUIT	2.0	- 19.3525 0.0130
MAJ-CBMH450(4)	HP-A2-7(2)	CBMH414	CONDUIT	2.0	16.7293 0.0130
MAJ-CBMH454(1)	CBMH454	HP-A2-4(1)	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH454(2)	HP-A2-4(1)	CBMH456	CONDUIT	2.0	10.0504 0.0130
MAJ-CBMH454(3)	CBMH454	HP-A2-4(2)	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH454(4)	HP-A2-4(2)	CBMH444/ST2	CONDUIT	2.0	25.8199 0.0130
MAJ-CBMH456(1)	CBMH456	HP-A2-2(1)	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH456(2)	HP-A2-2(1)	CB458	CONDUIT	2.0	8.5309 0.0130
MAJ-CBMH456(3)	CBMH456	HP-A2-2(2)	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH456(4)	HP-A2-2(2)	CBMH444/ST2	CONDUIT	2.0	23.0921 0.0130
MAJ-CBMH470(1)	CBMH470	HP-A1-1	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH470(2)	HP-A1-1	CBMH444/ST2	CONDUIT	2.0	28.6028 0.0130
MAJ-MD1	CB458	HP-MD1	CONDUIT	2.0	- 7.5212 0.0130
MAJ-MD2	CBMH254	MAJ-MD2	CONDUIT	2.0	- 5.5083 0.0130
MAJ-MD3	CB202	MAJ-MD3	CONDUIT	2.0	- 14.1393 0.0130
MAJ-PD1(1)	PD1	HP-A1-2	CONDUIT	2.0	- 2.5008 0.0130
MAJ-PD1(2)	HP-A1-2	CBMH430	CONDUIT	2.0	43.6436 0.0130
MAJ-PD2(1)	PD2	HP-A1-3	CONDUIT	2.0	- 2.5008 0.0130
MAJ-PD2(2)	HP-A1-3	CBMH430	CONDUIT	2.0	37.3632 0.0130
PD1-Out	PD1	MH466	CONDUIT	13.2	0.9849 0.0130
PD2-Out	PD2	MH466	CONDUIT	15.9	1.0063 0.0130
STM-10_(STM)	15_(STM)	MIN_MD	CONDUIT	13.6	0.2209 0.0130
STM-101_(STM)	CB406	CBMH404	CONDUIT	27.9	0.5011 0.0130
STM-102_(STM)	CBMH404	CBMH402	CONDUIT	27.9	0.5011 0.0130
STM-103_(STM)	CBMH402	MH400	CONDUIT	32.4	0.4938 0.0130
STM-104_(STM)	MH400	MH298	CONDUIT	10.7	0.3749 0.0130
STM-106_(STM)_1	MH298	ST8	CONDUIT	2.0	0.0152 0.0130
STM-106_(STM)_2	ST8	MH296	CONDUIT	2.0	0.0152 0.0130
STM-108_(STM)	MH296	CBMH294	CONDUIT	6.2	0.4808 0.0130

STM-109_(STM)	CBMH294	MH288	CONDUIT	6.1	0.4918	0.0130
STM-11_(STM)	CBMH470	MH468	CONDUIT	19.9	0.3526	0.0130
STM-113_(STM)	CBMH292	MH290	CONDUIT	6.1	0.4918	0.0130
STM-115_(STM)_1	MH290	ST7	CONDUIT	2.0	0.0152	0.0130
STM-115_(STM)_2	ST7	MH288	CONDUIT	2.0	0.0152	0.0130
STM-116_(STM)	CBMH414	MH412	CONDUIT	3.4	0.5970	0.0130
STM-118_(STM)_1	MH412	ST6	CONDUIT	2.0	0.0152	0.0130
STM-118_(STM)_2	ST6	MH410	CONDUIT	2.0	0.0152	0.0130
STM-12_(STM)	MH468	MH462	CONDUIT	29.3	0.2392	0.0130
STM-120_(STM)	MH410	CBMH408	CONDUIT	8.8	0.4525	0.0130
STM-122_(STM)	CBMH438	MH436	CONDUIT	6.2	0.4808	0.0130
STM-124_(STM)_1	MH436	ST5	CONDUIT	2.0	0.0152	0.0130
STM-124_(STM)_2	ST5	MH434	CONDUIT	2.0	0.0152	0.0130
STM-125_(STM)	MH434	MH432/ST4	CONDUIT	4.6	0.4329	0.0130
STM-126_(STM)	MH432/ST4	CBMH430	CONDUIT	6.2	0.4808	0.0130
STM-127_(STM)	CBMH430	MH428	CONDUIT	6.2	0.4808	0.0130
STM-13_(1)_(STM)	MH426_	MH418	CONDUIT	20.2	0.1487	0.0130
STM-13_(STM)	MH462	MH426_	CONDUIT	19.4	0.1550	0.0130
STM-130_(STM)	CB458	CBMH456	CONDUIT	19.1	0.5222	0.0130
STM-131_(STM)	CBMH456	CBMH454	CONDUIT	9.8	0.5102	0.0130
STM-132_(STM)	CBMH454	CBMH444/ST2	CONDUIT	39.8	0.5032	0.0130
STM-133_(STM)	CBMH444/ST2	MH440/ST3	CONDUIT	10.2	0.4892	0.0130
STM-135_(STM)	MH446	CBMH444/ST2	CONDUIT	4.7	0.4301	0.0130
STM-138_(STM)	CB460	CBMH454	CONDUIT	18.4	0.4899	0.0130
STM-139_(STM)	CBMH450	MH448	CONDUIT	3.3	0.6098	0.0130
STM-14_(STM)	MH418	MH416	CONDUIT	9.9	0.1006	0.0130
STM-141_(STM)_1	MH448	ST1	CONDUIT	2.0	0.0152	0.0130
STM-141_(STM)_2	ST1	MH446	CONDUIT	2.0	0.0152	0.0130
STM-145_(STM)	CBMH246/ST18	MH244	CONDUIT	12.6	0.4781	0.0130
STM-15_(1)_(STM)	MH286	MH278	CONDUIT	18.8	0.1597	0.0130

STM-15_(STM)	MH416	MH286	CONDUIT	55.3	0.1447	0.0130
STM-16_(STM)	MH278	MH262	CONDUIT	36.4	0.1648	0.0130
STM-17_(STM)	MH262	MH226	CONDUIT	22.7	0.1320	0.0130
STM-18_(1)_(STM)	MH220	MH216	CONDUIT	21.5	0.0929	0.0130
STM-18_(STM)	MH226	MH220	CONDUIT	19.0	0.1055	0.0130
STM-19_(STM)	MH216	MH212	CONDUIT	15.7	0.0637	0.0130
STM-20_(STM)	MH212	MH204	CONDUIT	25.3	0.0790	0.0130
STM-21_(STM)_1	MH204	MH200_Dummy	CONDUIT	82.1	0.0913	0.0130
STM-21_(STM)_2	MH200_Dummy	14_(STM)	CONDUIT	5.2	0.2868	0.0130
STM-22_(STM)	MH466	MH464	CONDUIT	30.9	0.3556	0.0130
STM-23_(STM)	MH464	MH462	CONDUIT	27.4	0.2555	0.0130
STM-24_(1)_(STM)	MH420	MH418	CONDUIT	33.7	0.3563	0.0130
STM-24_(STM)	CB424	MH420	CONDUIT	24.0	0.4998	0.0130
STM-26_(STM)	MH282	MH280	CONDUIT	22.3	0.4939	0.0130
STM-27_(STM)	MH280	MH278	CONDUIT	33.3	0.2400	0.0130
STM-44_(STM)	MH422	MH420	CONDUIT	15.7	0.3829	0.0130
STM-55_(STM)	MH284	MH280	CONDUIT	12.5	1.4378	0.0130
STM-58_(STM)	MH218	MH216	CONDUIT	36.6	1.0107	0.0130
STM-59_(STM)	CB210	CBMH208	CONDUIT	16.6	0.3019	0.0130
STM-60_(STM)	CBMH208	CBMH206	CONDUIT	42.0	0.1427	0.0130
STM-62_(STM)	CB202	MH200	CONDUIT	11.7	1.0283	0.0130
STM-63_(STM)	MH200	MH200_Dummy	CONDUIT	5.2	0.9561	0.0130
STM-64_(STM)	CB238	CBMH236	CONDUIT	15.9	0.5019	0.0130
STM-65_(STM)_1	CBMH236	MH234/ST16	CONDUIT	38.6	0.4927	0.0130
STM-65_(STM)_2	MH234/ST16	CBMH230	CONDUIT	7.7	0.5188	0.0130
STM-66_(STM)	CBMH230	CBMH228	CONDUIT	19.0	0.2637	0.0130
STM-70_(STM)_1	CB250	R-1_Dummy	CONDUIT	22.0	0.4955	0.0130
STM-70_(STM)_2	R-1_Dummy	MH238	CONDUIT	32.5	0.4951	0.0130
STM-71_(STM)	MH238	MH242	CONDUIT	40.3	0.2481	0.0130
STM-72_(STM)	MH242	MH240	CONDUIT	36.9	0.2440	0.0130

STM-73_(STM)	MH240	MH226	CONDUIT	6.9	
0.2899	0.0130				
STM-79_(STM)	MH224/ST14	CBMH222	CONDUIT	3.3	
0.6098	0.0130				
STM-82_(STM)	MH232/ST15	CBMH230	CONDUIT	4.8	
0.4175	0.0130				
STM-87_(STM)	CB260	CBMH258	CONDUIT	36.4	
0.4940	0.0130				
STM-88_(STM)_1	CBMH258	ST9	CONDUIT	2.0	
0.0152	0.0130				
STM-88_(STM)_2	ST9	CBMH254	CONDUIT	2.0	
0.0152	0.0130				
STM-89_(STM)_1	CBMH254	ST10	CONDUIT	2.0	
0.0152	0.0130				
STM-89_(STM)_2	ST10	CBMH252	CONDUIT	2.0	
0.0152	0.0130				
STM-9_(STM)	14_(STM)	15_(STM)	CONDUIT	4.1	
0.7371	0.0130				
STM-91_(STM)	CB256	CBMH254	CONDUIT	9.3	
0.9647	0.0130				
STM-92_(STM)	MH270/ST13	MH264	CONDUIT	12.6	
0.4751	0.0130				
STM-94_(STM)	CBMH268	MH266	CONDUIT	7.0	
0.5714	0.0130				
STM-96_(STM)_1	MH266	ST12	CONDUIT	2.0	
0.0152	0.0130				
STM-96_(STM)_2	ST12	MH264	CONDUIT	2.0	
0.0152	0.0130				
STM-97_(STM)	CBMH276	MH274	CONDUIT	6.6	
0.4552	0.0130				
STM-99_(STM)_1	MH274	ST11	CONDUIT	2.0	
0.0152	0.0130				
STM-99_(STM)_2	ST11	MH272	CONDUIT	2.0	
0.0152	0.0130				
R1_OvF	R1_S	HP-A1-5	WEIR		
R10_OvF	R10_S	CBMH214/ST17	WEIR		
R2_OvF	R2_S	HP-A2-19.1	WEIR		
R3_OvF	R3_S	CBMH408	WEIR		
R4_OvF	R4_S	HP-A2-7(2)	WEIR		
R5_OvF	R5_S	CBMH444/ST2	WEIR		
R6_OvF	R6_S	CBMH444/ST2	WEIR		
R7_OvF	R7_S	HP-A2-6	WEIR		
R8_OvF	R8_S	CBMH294	WEIR		
R9_OvF	R9_S	CBMH268	WEIR		
O-CBMH206	CBMH206	MH204	OUTLET		
O-CBMH214	CBMH214/ST17	MH212	OUTLET		
O-CBMH222	CBMH222	MH220	OUTLET		
O-CBMH228	CBMH228	MH226	OUTLET		
O-CBMH252	CBMH252	MH238	OUTLET		
O-CBMH408	CBMH408	MH286	OUTLET		
O-MH244	MH244	MH242	OUTLET		
O-MH264	MH264	MH262	OUTLET		
O-MH272	MH272	MH262	OUTLET		
O-MH288	MH288	MH286	OUTLET		
O-MH428	MH428	MH426_	OUTLET		
O-MH440	MH440/ST3	MH426_	OUTLET		
R10-Out	R10_S	MH218	OUTLET		
R1-Out	R1_S	R-1_Dummy	OUTLET		
R2-Out	R2_S	MH238	OUTLET		

R3-Out	R3_S	MH278	OUTLET
R4-Out	R4_S	MH416	OUTLET
R5-Out	R5_S	MH468	OUTLET
R6-Out	R6_S	MH462	OUTLET
R7-Out	R7_S	MH422	OUTLET
R8-Out	R8_S	MH284	OUTLET
R9-Out	R9_S	MH282	OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
MAJ-CB210(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	40250.57
MAJ-CB210(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	40250.57
MAJ-CB238(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	23220.06
MAJ-CB238(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	30723.59
MAJ-CB250(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	123087.46
MAJ-CB250(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	69215.12
MAJ-CB260(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB260(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB406(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	46510.07
MAJ-CB406(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	28442.21
MAJ-CB406(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1	45024.40
MAJ-CB406(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1	74174.06
MAJ-CB406(5)	RECT_OPEN	1.00	3.00	0.60	3.00	1	78892.68
MAJ-CB424(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	32847.99
MAJ-CB424(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	78892.68
MAJ-CB458(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	71231.45
MAJ-CB458(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB460(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	32847.99
MAJ-CB460(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	41900.70
MAJ-CB460(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1	36733.45
MAJ-CB460(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1	47951.44

MAJ-CBMH206(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH206(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH208	RECT_OPEN	1.00	3.00	0.60	3.00	1
40250.57						
MAJ-CBMH208(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
23220.06						
MAJ-CBMH214(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH214(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH222(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH222(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
74174.06						
MAJ-CBMH222(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH222(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH228(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH228(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH230(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH230(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH236(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
40250.57						
MAJ-CBMH236(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
71231.45						
MAJ-CBMH246(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH246(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH252(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
61733.10						
MAJ-CBMH252(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
77030.48						
MAJ-CBMH254(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH254(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH258(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH258(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH268(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH268(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH276(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH276(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH292(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH292(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						

MAJ-CBMH292(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH292(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH402(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH402(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH404(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
30723.59						
MAJ-CBMH404(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
47951.44						
MAJ-CBMH414(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH414(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH430(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH430(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH438(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
60599.46						
MAJ-CBMH438(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH444(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH444(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH444(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH444(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH450(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH450(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH450(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
72222.70						
MAJ-CBMH450(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
67149.65						
MAJ-CBMH454(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH454(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH454(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH454(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH456(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH456(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
47951.44						
MAJ-CBMH456(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH456(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
78892.68						
MAJ-CBMH470(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH470(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
87802.97						

MAJ-MD1	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-MD2	RECT_OPEN	1.00	3.00	0.60	3.00	1
38531.43						
MAJ-MD3	RECT_OPEN	1.00	3.00	0.60	3.00	1
61733.10						
MAJ-PD1(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
25962.28						
MAJ-PD1(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
108458.87						
MAJ-PD2(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
25962.28						
MAJ-PD2(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
100352.25						
PD1-Out	CIRCULAR	0.20	0.03	0.05	0.20	1
32.55						
PD2-Out	CIRCULAR	0.20	0.03	0.05	0.20	1
32.90						
STM-10_(STM)	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
1415.82						
STM-101_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.46						
STM-102_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.46						
STM-103_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.96						
STM-104_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
59.21						
STM-106_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-106_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-108_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-109_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.82						
STM-11_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.43						
STM-113_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.82						
STM-115_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-115_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-116_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
74.72						
STM-118_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-118_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-12_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
139.46						
STM-120_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
65.05						
STM-122_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-124_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-124_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

STM-125_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
63.63						
STM-126_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-127_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-13_(1)_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
236.82						
STM-13_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
241.72						
STM-130_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
69.88						
STM-131_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
69.08						
STM-132_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.60						
STM-133_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.64						
STM-135_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
63.42						
STM-138_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.69						
STM-139_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
75.52						
STM-14_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
194.76						
STM-141_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-141_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-145_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
66.87						
STM-15_(1)_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
245.42						
STM-15_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
233.55						
STM-16_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
249.27						
STM-17_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
223.13						
STM-18_(1)_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
339.41						
STM-18_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
361.60						
STM-19_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
280.98						
STM-20_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
312.84						
STM-21_(STM)_1	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
910.23						
STM-21_(STM)_2	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
1613.22						
STM-22_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.67						
STM-23_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
144.11						
STM-24_(1)_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.72						
STM-24_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.37						

STM-26_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.97						
STM-27_(STM)	CIRCULAR	0.38	0.11	0.09	0.38	1
85.89						
STM-44_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
59.84						
STM-55_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
115.96						
STM-58_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
97.22						
STM-59_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
156.67						
STM-60_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
420.55						
STM-62_(STM)	CIRCULAR	0.25	0.05	0.06	0.25	1
60.31						
STM-63_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
94.56						
STM-64_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.51						
STM-65_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
67.88						
STM-65_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
69.66						
STM-66_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
146.42						
STM-70_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
68.07						
STM-70_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
68.05						
STM-71_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
142.01						
STM-72_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
140.85						
STM-73_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
153.51						
STM-79_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
75.52						
STM-82_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
62.49						
STM-87_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.97						
STM-88_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-88_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-89_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-89_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-9_(STM)	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
2586.23						
STM-91_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
94.98						
STM-92_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
66.65						
STM-94_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
73.10						
STM-96_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

STM-96_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-97_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
65.25						
STM-99_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-99_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

****
Analysis Options
****
Flow Units ..... LPS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 11/17/2025 00:00:00
Ending Date 11/25/2025 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:01:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 2.00 sec
Variable Time Step ..... YES
Maximum Trials 8
Number of Threads 16
Head Tolerance ..... 0.001500 m

**********	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
**********	---------	-------
Initial LID Storage	0.005	0.980
Total Precipitation	0.434	82.323
Evaporation Loss	0.000	0.000
Infiltration Loss	0.043	8.156
Surface Runoff	0.394	74.665
Final Storage	0.005	0.980
Continuity Error (%)	-0.597	

**********	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
**********	---------	---------
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.394	3.937
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000

```
External Inflow .........          0.002          0.016
External Outflow .........         0.395          3.952
Flooding Loss ............         0.000          0.000
Evaporation Loss .........         0.000          0.000
Exfiltration Loss ........         0.000          0.000
Initial Stored Volume ....         0.037          0.365
Final Stored Volume ......         0.037          0.366
Continuity Error (%) .....        -0.002
```

```
*************************
Highest Continuity Errors
*************************
Node CBMH222 (-9.78%)
Node HP-A2-19.1 (-1.39%)
Node CBMH214/ST17 (1.20%)
Node CB260 (1.04%)
Node CBMH404 (1.01%)
```

```
**************************
Time-Step Critical Elements
**************************
Link STM-118_(STM)_2 (10.05%)
Link STM-9_(STM) (5.25%)
Link STM-115_(STM)_2 (4.91%)
Link STM-89_(STM)_2 (4.22%)
Link STM-106_(STM)_2 (4.20%)
```

```
*******************************
Highest Flow Instability Indexes
*******************************
Link O-CBMH214 (25)
Link O-CBMH222 (17)
```

```
*********************************
Most Frequent Nonconverging Nodes
*********************************
Convergence obtained at all time steps.
```

```
************************
Routing Time Step Summary
************************
Minimum Time Step           :     0.50 sec
Average Time Step           :     1.77 sec
Maximum Time Step           :     2.00 sec
% of Time in Steady State   :     0.00
Average Iterations per Step :     2.00
% of Steps Not Converging   :     0.00
Time Step Frequencies       :
    2.000 -  1.516 sec      :    77.86 %
    1.516 -  1.149 sec      :    11.08 %
    1.149 -  0.871 sec      :     4.80 %
    0.871 -  0.660 sec      :     6.04 %
```

0.660 - 0.500 sec : 0.22 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff LPS	Runoff Coeff
A0-1	82.32	0.00	0.00	39.93	18.94	26.41	45.35	0.03	25.14	0.551
A0-2	82.32	0.00	0.00	31.38	33.78	17.91	51.69	0.19	139.23	0.628
A0-3	82.32	0.00	0.00	52.93	0.00	30.80	30.80	0.07	74.77	0.374
A1-1	82.32	0.00	0.00	25.71	42.01	15.56	57.57	0.03	23.03	0.699
A1-2	82.32	0.00	0.00	0.00	82.43	0.00	82.43	0.01	5.95	1.001
A1-3	82.32	0.00	0.00	0.00	82.41	0.00	82.41	0.01	5.95	1.001
A1-4	82.32	0.00	0.00	0.00	82.45	0.00	82.45	0.01	8.93	1.001
A1-5	82.32	0.00	0.00	0.00	82.57	0.00	82.57	0.04	22.82	1.003
A1-6	82.32	0.00	0.00	52.34	0.00	32.17	32.17	0.01	10.49	0.391
A2-1	82.32	0.00	0.00	1.55	80.07	1.03	81.11	0.04	25.70	0.985
A2-10	82.32	0.00	0.00	14.06	60.14	8.98	69.12	0.02	14.33	0.840
A2-11	82.32	0.00	0.00	0.00	82.49	0.00	82.49	0.01	8.43	1.002
A2-12	82.32	0.00	0.00	11.99	63.47	7.58	71.05	0.02	13.42	0.863
A2-13	82.32	0.00	0.00	6.77	71.83	4.31	76.14	0.12	74.99	0.925
A2-14	82.32	0.00	0.00	2.07	79.28	1.38	80.66	0.14	85.88	0.980
A2-15	82.32	0.00	0.00	2.07	79.26	1.38	80.64	0.15	88.84	0.980
A2-16	82.32	0.00	0.00	3.63	76.82	2.38	79.20	0.15	95.38	0.962
A2-17	82.32	0.00	0.00	3.63	76.78	2.39	79.17	0.18	113.58	0.962
A2-18	82.32	0.00	0.00	0.00	82.40	0.00	82.40	0.02	14.38	1.001
A2-19.1	82.32	0.00	0.00	0.00	82.55	0.00	82.55	0.06	37.20	1.003
A2-19.2	82.32	0.00	0.00	0.00	82.55	0.00	82.55	0.02	14.88	1.003

A2-19.3			82.32	0.00	0.00	0.00	82.41
0.00	82.41	0.02	13.39	1.001			
A2-19.4			82.32	0.00	0.00	0.00	82.48
0.00	82.48	0.03	20.83	1.002			
A2-2			82.32	0.00	0.00	15.11	58.50
9.57	68.06	0.03	17.58	0.827			
A2-20			82.32	0.00	0.00	3.11	77.62
2.05	79.68	0.13	77.29	0.968			
A2-21			82.32	0.00	0.00	10.89	65.07
7.19	72.26	0.01	8.69	0.878			
A2-22			82.32	0.00	0.00	3.62	76.62
2.41	79.03	0.02	9.34	0.960			
A2-23			82.32	0.00	0.00	2.07	79.25
1.38	80.63	0.09	54.29	0.979			
A2-24			82.32	0.00	0.00	11.02	65.27
6.66	71.93	0.11	72.37	0.874			
A2-25			82.32	0.00	0.00	2.07	79.26
1.38	80.64	0.09	54.78	0.980			
A2-26			82.32	0.00	0.00	1.56	80.28
1.03	81.31	0.26	155.10	0.988			
A2-27			82.32	0.00	0.00	10.39	65.91
6.77	72.68	0.01	8.70	0.883			
A2-28			82.32	0.00	0.00	8.30	69.21
5.46	74.67	0.02	11.67	0.907			
A2-29			82.32	0.00	0.00	10.90	65.08
7.15	72.22	0.05	30.91	0.877			
A2-3			82.32	0.00	0.00	19.60	51.99
11.36	63.35	0.06	44.44	0.770			
A2-4			82.32	0.00	0.00	1.55	79.93
1.03	80.96	0.02	14.33	0.983			
A2-5			82.32	0.00	0.00	3.12	77.81
2.01	79.82	0.22	133.29	0.970			
A2-6			82.32	0.00	0.00	1.55	80.18
1.03	81.22	0.19	114.14	0.987			
A2-7			82.32	0.00	0.00	6.77	71.82
4.32	76.14	0.09	58.94	0.925			
A2-8			82.32	0.00	0.00	7.30	71.04
4.59	75.63	0.08	54.35	0.919			
A2-9			82.32	0.00	0.00	6.77	71.81
4.32	76.14	0.12	74.05	0.925			
R-1			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.23	137.89	1.001			
R-10			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.04	22.32	1.001			
R-2			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.13	78.86	1.001			
R-3			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.15	93.25	1.001			
R-4			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.10	59.02	1.001			
R-5			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.03	20.83	1.001			
R-6			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.10	62.50	1.001			
R-7			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.08	47.62	1.001			
R-8			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.04	23.81	1.001			
R-9			82.32	0.00	0.00	0.00	82.40
0.00	82.40	0.05	31.25	1.001			

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
HP-A1-1	JUNCTION	0.00	0.00	96.60	0 00:00	0.00
HP-A1-2	JUNCTION	0.00	0.00	96.85	0 00:00	0.00
HP-A1-3	JUNCTION	0.00	0.00	96.75	0 00:00	0.00
HP-A1-4	JUNCTION	0.00	0.00	96.45	0 00:00	0.00
HP-A1-5	JUNCTION	0.00	0.00	96.50	0 00:00	0.00
HP-A2-1	JUNCTION	0.00	0.00	96.65	0 00:00	0.00
HP-A2-10(1)	JUNCTION	0.00	0.00	96.41	0 00:00	0.00
HP-A2-10(2)	JUNCTION	0.00	0.00	96.40	0 00:00	0.00
HP-A2-11	JUNCTION	0.00	0.00	96.42	0 00:00	0.00
HP-A2-12	JUNCTION	0.00	0.00	96.40	0 00:00	0.00
HP-A2-13(1)	JUNCTION	0.00	0.00	96.30	0 00:00	0.00
HP-A2-13(2)	JUNCTION	0.00	0.00	96.35	0 00:00	0.00
HP-A2-16	JUNCTION	0.00	0.00	96.15	0 00:00	0.00
HP-A2-17	JUNCTION	0.00	0.00	96.20	0 00:00	0.00
HP-A2-18	JUNCTION	0.00	0.00	96.65	0 00:00	0.00
HP-A2-19.1	JUNCTION	0.00	0.00	96.43	0 02:33	0.00
HP-A2-19.3	JUNCTION	0.00	0.00	96.50	0 00:00	0.00
HP-A2-19.4	JUNCTION	0.00	0.00	96.65	0 00:00	0.00
HP-A2-2(1)	JUNCTION	0.00	0.00	96.45	0 00:00	0.00
HP-A2-2(2)	JUNCTION	0.00	0.00	96.50	0 00:00	0.00
HP-A2-20	JUNCTION	0.00	0.00	96.50	0 00:00	0.00
HP-A2-21	JUNCTION	0.00	0.00	96.32	0 00:00	0.00
HP-A2-22	JUNCTION	0.00	0.00	96.37	0 00:00	0.00
HP-A2-23	JUNCTION	0.00	0.00	96.30	0 00:00	0.00
HP-A2-24	JUNCTION	0.00	0.00	96.20	0 00:00	0.00
HP-A2-25	JUNCTION	0.00	0.00	96.35	0 00:00	0.00
HP-A2-25(2)	JUNCTION	0.00	0.00	96.22	0 00:00	0.00
HP-A2-26	JUNCTION	0.00	0.00	96.25	0 00:00	0.00
HP-A2-27	JUNCTION	0.00	0.00	96.40	0 00:00	0.00
HP-A2-28	JUNCTION	0.00	0.00	96.32	0 00:00	0.00
HP-A2-29	JUNCTION	0.00	0.00	96.45	0 00:00	0.00
HP-A2-3(1)	JUNCTION	0.00	0.00	96.43	0 00:00	0.00
HP-A2-3(2)	JUNCTION	0.00	0.00	96.45	0 00:00	0.00
HP-A2-4(1)	JUNCTION	0.00	0.00	96.50	0 00:00	0.00
HP-A2-4(2)	JUNCTION	0.00	0.00	96.55	0 00:00	0.00
HP-A2-5(1)	JUNCTION	0.00	0.00	96.35	0 00:00	0.00
HP-A2-5(2)	JUNCTION	0.00	0.00	96.25	0 00:00	0.00
HP-A2-6	JUNCTION	0.00	0.00	96.30	0 00:00	0.00
HP-A2-7(1)	JUNCTION	0.00	0.00	96.30	0 00:00	0.00
HP-A2-7(2)	JUNCTION	0.00	0.00	96.38	0 02:31	0.00
HP-A2-8	JUNCTION	0.00	0.00	96.27	0 00:00	0.00
HP-A2-9	JUNCTION	0.00	0.00	96.35	0 00:00	0.00
HP-MD1	OUTFALL	0.00	0.00	96.43	0 00:00	0.00
MAJ-MD	OUTFALL	0.00	0.00	96.43	0 00:00	0.00
MAJ-MD2	OUTFALL	0.00	0.00	96.41	0 00:00	0.00
MAJ-MD3	OUTFALL	0.00	0.00	96.63	0 00:00	0.00

MIN_MD	OUTFALL	0.88	0.88	93.88	0	00:00	0.88
OF-Strandherd	OUTFALL	0.00	0.00	95.49	0	00:00	0.00
OF-Systemhouse	OUTFALL	0.00	0.00	95.88	0	00:00	0.00
14_(STM)	STORAGE	0.79	0.79	93.88	0	02:06	0.79
15_(STM)	STORAGE	0.85	0.85	93.88	0	02:06	0.85
CB202	STORAGE	0.00	0.07	94.04	0	02:10	0.07
CB210	STORAGE	0.10	1.69	96.09	0	03:12	1.69
CB238	STORAGE	0.10	0.99	95.67	0	06:10	0.99
CB250	STORAGE	0.00	0.12	94.47	0	02:10	0.12
CB256	STORAGE	0.03	0.87	95.83	0	04:00	0.87
CB260	STORAGE	0.04	0.93	95.83	0	03:59	0.93
CB406	STORAGE	0.02	0.31	95.22	0	06:13	0.31
CB424	STORAGE	0.00	0.07	94.44	0	02:10	0.07
CB458	STORAGE	0.11	1.16	96.06	0	06:12	1.16
CB460	STORAGE	0.15	1.33	96.06	0	06:12	1.33
CBMH206	STORAGE	0.14	2.11	96.09	0	03:12	2.11
CBMH208	STORAGE	0.12	1.90	96.09	0	03:11	1.90
CBMH214/ST17	STORAGE	0.38	2.32	96.16	0	06:10	2.32
CBMH222	STORAGE	0.30	2.43	96.17	0	03:27	2.43
CBMH228	STORAGE	0.29	1.73	95.67	0	06:10	1.73
CBMH230	STORAGE	0.23	1.53	95.67	0	06:10	1.53
CBMH236	STORAGE	0.14	1.23	95.67	0	06:10	1.23
CBMH246/ST18	STORAGE	0.28	1.61	95.71	0	04:23	1.61
CBMH252	STORAGE	0.14	1.72	95.83	0	04:00	1.72
CBMH254	STORAGE	0.11	1.56	95.83	0	04:00	1.56
CBMH258	STORAGE	0.11	1.56	95.83	0	04:00	1.56
CBMH268	STORAGE	0.12	1.39	96.13	0	05:04	1.39
CBMH276	STORAGE	0.09	0.81	95.06	0	05:40	0.81
CBMH292	STORAGE	0.35	1.12	95.22	0	06:13	1.12
CBMH294	STORAGE	0.23	0.99	95.22	0	06:13	0.99
CBMH402	STORAGE	0.10	0.66	95.22	0	06:14	0.66
CBMH404	STORAGE	0.05	0.46	95.22	0	06:13	0.46
CBMH408	STORAGE	0.26	1.09	95.14	0	06:12	1.09
CBMH414	STORAGE	0.11	0.72	95.14	0	06:12	0.72
CBMH430	STORAGE	0.25	1.48	95.87	0	06:12	1.48
CBMH438	STORAGE	0.14	1.19	95.87	0	06:12	1.19
CBMH444/ST2	STORAGE	0.32	1.71	96.06	0	06:11	1.71
CBMH450	STORAGE	0.17	1.40	96.07	0	06:11	1.40
CBMH454	STORAGE	0.18	1.43	96.06	0	06:12	1.43
CBMH456	STORAGE	0.15	1.32	96.06	0	06:12	1.32
CBMH470	STORAGE	0.00	0.15	94.49	0	02:10	0.15
MH200	STORAGE	0.18	0.18	93.88	0	02:10	0.18
MH200_Dummy	STORAGE	0.75	0.75	93.88	0	02:06	0.75
MH204	STORAGE	0.67	0.68	93.89	0	02:06	0.68
MH212	STORAGE	0.54	0.56	93.90	0	02:12	0.56
MH216	STORAGE	0.52	0.54	93.90	0	02:12	0.54
MH218	STORAGE	0.00	0.05	94.23	0	02:22	0.05
MH220	STORAGE	0.49	0.52	93.91	0	02:12	0.52
MH224/ST14	STORAGE	0.27	2.28	96.18	0	03:24	2.27
MH226	STORAGE	0.46	0.49	93.91	0	02:12	0.49
MH232/ST15	STORAGE	0.32	1.57	95.67	0	06:10	1.57
MH234/ST16	STORAGE	0.34	1.57	95.67	0	06:10	1.57
MH238	STORAGE	0.01	0.18	94.11	0	02:10	0.18
MH240	STORAGE	0.16	0.24	93.96	0	02:11	0.24
MH242	STORAGE	0.06	0.19	94.01	0	02:11	0.19
MH244	STORAGE	0.17	1.67	95.71	0	04:23	1.67
MH262	STORAGE	0.29	0.34	93.93	0	02:12	0.34

MH264	STORAGE	0.27	2.18	96.13	0	05:04	2.18
MH266	STORAGE	0.23	2.03	96.13	0	05:04	2.03
MH270/ST13	STORAGE	0.43	2.18	96.13	0	05:04	2.18
MH272	STORAGE	0.25	1.22	95.06	0	05:41	1.22
MH274	STORAGE	0.13	0.99	95.06	0	05:41	0.99
MH278	STORAGE	0.22	0.29	93.95	0	02:12	0.29
MH280	STORAGE	0.00	0.11	94.16	0	02:23	0.11
MH282	STORAGE	0.00	0.07	94.30	0	02:23	0.07
MH284	STORAGE	0.00	0.04	94.27	0	02:22	0.04
MH286	STORAGE	0.18	0.26	93.96	0	02:12	0.26
MH288	STORAGE	0.32	1.16	95.22	0	06:13	1.16
MH290	STORAGE	0.38	1.15	95.22	0	06:13	1.15
MH296	STORAGE	0.21	0.95	95.22	0	06:13	0.95
MH298	STORAGE	0.21	0.95	95.22	0	06:13	0.95
MH400	STORAGE	0.17	0.85	95.22	0	06:13	0.85
MH410	STORAGE	0.18	0.90	95.14	0	06:12	0.90
MH412	STORAGE	0.18	0.90	95.14	0	06:12	0.90
MH416	STORAGE	0.09	0.23	94.02	0	02:11	0.23
MH418	STORAGE	0.07	0.23	94.04	0	02:11	0.23
MH420	STORAGE	0.00	0.12	94.36	0	02:10	0.12
MH422	STORAGE	0.00	0.08	94.44	0	02:25	0.08
MH426_	STORAGE	0.04	0.20	94.05	0	02:11	0.20
MH428	STORAGE	0.32	1.66	95.87	0	06:12	1.66
MH432/ST4	STORAGE	0.36	1.57	95.87	0	06:12	1.57
MH434	STORAGE	0.20	1.37	95.87	0	06:12	1.37
MH436	STORAGE	0.20	1.37	95.87	0	06:12	1.37
MH440/ST3	STORAGE	0.33	1.84	96.06	0	06:11	1.84
MH446	STORAGE	0.22	1.56	96.06	0	06:11	1.56
MH448	STORAGE	0.22	1.57	96.07	0	06:11	1.56
MH462	STORAGE	0.01	0.18	94.07	0	02:10	0.18
MH464	STORAGE	0.00	0.10	94.22	0	02:10	0.10
MH466	STORAGE	0.00	0.10	94.48	0	02:10	0.10
MH468	STORAGE	0.00	0.14	94.26	0	02:10	0.14
PD1	STORAGE	0.00	0.06	94.66	0	02:05	0.06
PD2	STORAGE	0.00	0.06	94.71	0	02:10	0.06
R-1_Dummy	STORAGE	0.01	0.19	94.43	0	02:10	0.19
R1_S	STORAGE	0.01	0.15	98.15	0	02:31	0.15
R10_S	STORAGE	0.00	0.14	98.14	0	02:22	0.14
R2_S	STORAGE	0.01	0.15	98.15	0	02:33	0.15
R3_S	STORAGE	0.01	0.15	98.15	0	02:33	0.15
R4_S	STORAGE	0.01	0.15	98.15	0	02:31	0.15
R5_S	STORAGE	0.00	0.14	98.14	0	02:24	0.14
R6_S	STORAGE	0.00	0.12	98.12	0	02:25	0.12
R7_S	STORAGE	0.00	0.12	98.12	0	02:24	0.12
R8_S	STORAGE	0.00	0.14	98.14	0	02:22	0.14
R9_S	STORAGE	0.00	0.14	98.14	0	02:22	0.14
ST1	STORAGE	0.37	1.71	96.06	0	06:11	1.71
ST10	STORAGE	0.26	1.71	95.83	0	04:00	1.71
ST11	STORAGE	0.25	1.11	95.06	0	05:41	1.11
ST12	STORAGE	0.38	2.18	96.13	0	05:04	2.18
ST5	STORAGE	0.35	1.52	95.87	0	06:12	1.52
ST6	STORAGE	0.33	1.05	95.14	0	06:12	1.05
ST7	STORAGE	0.40	1.17	95.22	0	06:13	1.17
ST8	STORAGE	0.36	1.10	95.22	0	06:13	1.10
ST9	STORAGE	0.26	1.71	95.83	0	04:00	1.71

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
HP-A1-1	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A1-2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A1-3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A1-4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A1-5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-1	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-10(1)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-10(2)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-11	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-12	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-13(1)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-13(2)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-16	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-17	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-18	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-19.1	JUNCTION	0.00	0.17	0 02:33	0	9.54e-05	-1.374
HP-A2-19.3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-19.4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-2(1)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-2(2)	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-20	JUNCTION	0.00	0.00	0 00:00	0	0	0.000
HP-A2-21	JUNCTION	0.00	0.00	0 00:00	0	0	0.000

HP-A2-22	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-23	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-24	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-25	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-25(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-26	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-27	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-28	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-29	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-3(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-3(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-4(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-4(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-5(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-5(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-6	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-7(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-7(2)	JUNCTION	0.00	0.56	0	02:31	0	0.000485
-0.112							
HP-A2-8	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-9	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-MD1	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MAJ-MD	OUTFALL	74.77	74.77	0	02:10	0.0681	0.0681
0.000							
MAJ-MD2	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MAJ-MD3	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MIN_MD	OUTFALL	0.00	168.78	0	02:12	0	3.69
0.000							
OF-Strandherd	OUTFALL	139.23	139.23	0	02:10	0.186	0.186
0.000							
OF-Systemhouse	OUTFALL	25.14	25.14	0	02:10	0.0254	0.0254
0.000							
14_(STM)	STORAGE	0.00	168.74	0	02:12	0	3.69
-0.000							
15_(STM)	STORAGE	0.00	168.76	0	02:12	0	3.69
-0.000							
CB202	STORAGE	10.49	10.49	0	02:10	0.00837	0.00837
-0.010							

CB210	STORAGE	8.70	8.70	0	02:10	0.0131	0.0139
0.065							
CB238	STORAGE	8.69	8.69	0	02:10	0.013	0.013
0.652							
CB250	STORAGE	22.82	22.82	0	02:10	0.038	0.038
-0.034							
CB256	STORAGE	14.88	14.88	0	02:10	0.0248	0.0248
0.250							
CB260	STORAGE	14.38	14.38	0	02:10	0.0239	0.0244
1.049							
CB406	STORAGE	14.33	14.33	0	02:10	0.0207	0.0207
-0.084							
CB424	STORAGE	8.93	8.93	0	02:10	0.0148	0.0148
-0.059							
CB458	STORAGE	25.70	25.70	0	02:10	0.0422	0.0422
0.437							
CB460	STORAGE	44.44	44.44	0	02:10	0.0646	0.0646
-0.029							
CBMH206	STORAGE	30.91	30.91	0	02:10	0.0462	0.0872
-0.014							
CBMH208	STORAGE	11.67	26.15	0	02:07	0.0179	0.0418
0.034							
CBMH214/ST17	STORAGE	155.10	155.10	0	02:10	0.255	0.268
1.216							
CBMH222	STORAGE	54.78	54.78	0	02:10	0.0895	0.142
-8.906							
CBMH228	STORAGE	72.37	72.37	0	02:10	0.11	0.306
-0.003							
CBMH230	STORAGE	54.29	122.33	0	02:10	0.0887	0.351
0.010							
CBMH236	STORAGE	9.34	18.55	0	02:05	0.015	0.0279
-0.356							
CBMH246/ST18	STORAGE	77.29	77.29	0	02:10	0.125	0.136
0.005							
CBMH252	STORAGE	37.20	37.20	0	02:10	0.0619	0.203
0.001							
CBMH254	STORAGE	13.39	28.27	0	02:10	0.0223	0.121
-0.044							
CBMH258	STORAGE	20.83	35.28	0	02:08	0.0346	0.059
-0.439							
CBMH268	STORAGE	113.58	113.58	0	02:10	0.183	0.183
0.216							
CBMH276	STORAGE	95.38	95.38	0	02:10	0.154	0.154
0.217							
CBMH292	STORAGE	74.99	74.99	0	02:10	0.117	0.117
-0.000							
CBMH294	STORAGE	88.84	88.84	0	02:10	0.145	0.281
-0.001							
CBMH402	STORAGE	13.42	36.37	0	02:10	0.0199	0.0543
0.008							
CBMH404	STORAGE	8.43	22.70	0	02:10	0.014	0.0348
1.020							
CBMH408	STORAGE	85.88	85.88	0	02:10	0.14	0.37
0.002							
CBMH414	STORAGE	74.05	74.05	0	02:10	0.116	0.116
0.117							
CBMH430	STORAGE	114.14	114.14	0	02:10	0.188	0.425
0.007							
CBMH438	STORAGE	54.35	54.35	0	02:10	0.0847	0.0847
0.244							

CBMH444/ST2	STORAGE	133.29	219.85	0	02:10	0.216	0.552	-0.018
CBMH450	STORAGE	58.94	58.94	0	02:10	0.0921	0.0924	0.123
CBMH454	STORAGE	14.33	92.59	0	02:10	0.0235	0.155	-0.055
CBMH456	STORAGE	17.58	41.12	0	02:04	0.0252	0.0672	-0.065
CBMH470	STORAGE	23.03	23.03	0	02:10	0.0299	0.0299	-0.003
MH200	STORAGE	0.00	10.39	0	02:10	0	0.0167	0.003
MH200_Dummy	STORAGE	0.00	168.74	0	02:13	0	3.7	-0.000
MH204	STORAGE	0.00	161.30	0	02:13	0	3.68	0.000
MH212	STORAGE	0.00	159.24	0	02:13	0	3.6	-0.090
MH216	STORAGE	0.00	157.40	0	02:12	0	3.34	-0.001
MH218	STORAGE	0.00	5.24	0	02:22	0	0.0371	0.001
MH220	STORAGE	0.00	152.13	0	02:12	0	3.31	0.424
MH224/ST14	STORAGE	0.00	51.33	0	02:05	0	0.0547	-0.002
MH226	STORAGE	0.00	150.23	0	02:12	0	3.21	-0.002
MH232/ST15	STORAGE	0.00	78.71	0	02:10	0	0.118	-0.008
MH234/ST16	STORAGE	0.00	54.19	0	02:05	0	0.082	0.020
MH238	STORAGE	0.00	49.39	0	02:10	0	0.566	-0.001
MH240	STORAGE	0.00	50.70	0	02:11	0	0.698	-0.000
MH242	STORAGE	0.00	50.76	0	02:10	0	0.694	0.038
MH244	STORAGE	0.00	3.84	0	02:04	0	0.125	-0.004
MH262	STORAGE	0.00	99.18	0	02:12	0	2.29	-0.000
MH264	STORAGE	0.00	84.70	0	02:11	0	0.216	0.018
MH266	STORAGE	0.00	113.42	0	02:09	0	0.183	-0.171
MH270/ST13	STORAGE	0.00	77.22	0	02:11	0	0.0378	-0.059
MH272	STORAGE	0.00	2.06	0	02:10	0	0.154	-0.000
MH274	STORAGE	0.00	94.34	0	02:06	0	0.153	-0.137
MH278	STORAGE	0.00	96.12	0	02:12	0	1.95	0.000
MH280	STORAGE	0.00	12.52	0	02:22	0	0.0915	0.001
MH282	STORAGE	0.00	7.14	0	02:22	0	0.0519	0.001
MH284	STORAGE	0.00	5.38	0	02:22	0	0.0396	-0.004

MH286	STORAGE	0.00	74.34	0	02:11	0	1.7
0.000							
MH288	STORAGE	0.00	30.65	0	02:09	0	0.356
0.000							
MH290	STORAGE	0.00	73.95	0	02:10	0	0.117
-0.000							
MH296	STORAGE	0.00	64.85	0	02:06	0	0.215
0.000							
MH298	STORAGE	0.00	32.03	0	02:08	0	0.0546
-0.091							
MH400	STORAGE	0.00	35.34	0	02:08	0	0.0543
-0.494							
MH410	STORAGE	0.00	83.88	0	02:05	0	0.341
-0.001							
MH412	STORAGE	0.00	73.30	0	02:09	0	0.116
-0.081							
MH416	STORAGE	0.00	72.08	0	02:11	0	1.12
-0.006							
MH418	STORAGE	0.00	65.24	0	02:11	0	1.02
-0.000							
MH420	STORAGE	0.00	15.91	0	02:10	0	0.094
0.007							
MH422	STORAGE	0.00	7.82	0	02:24	0	0.0791
0.001							
MH426_	STORAGE	0.00	49.89	0	02:10	0	0.926
-0.025							
MH428	STORAGE	0.00	3.08	0	02:05	0	0.272
-0.002							
MH432/ST4	STORAGE	0.00	110.17	0	02:10	0	0.325
-0.005							
MH434	STORAGE	0.00	62.65	0	02:10	0	0.243
-0.000							
MH436	STORAGE	0.00	53.20	0	02:10	0	0.0845
-0.171							
MH440/ST3	STORAGE	0.00	75.13	0	02:10	0	0.464
-0.013							
MH446	STORAGE	0.00	72.29	0	02:10	0	0.256
0.002							
MH448	STORAGE	0.00	57.80	0	02:10	0	0.0923
-0.070							
MH462	STORAGE	0.00	46.49	0	02:10	0	0.188
-0.009							
MH464	STORAGE	0.00	11.90	0	02:10	0	0.0198
-0.006							
MH466	STORAGE	0.00	11.90	0	02:10	0	0.0198
-0.005							
MH468	STORAGE	0.00	26.05	0	02:10	0	0.0646
-0.002							
PD1	STORAGE	5.95	5.95	0	02:10	0.00989	0.00989
-0.001							
PD2	STORAGE	5.95	5.95	0	02:10	0.00989	0.00989
-0.001							
R-1_Dummy	STORAGE	0.00	39.19	0	02:10	0	0.267
0.005							
R1_S	STORAGE	137.89	137.89	0	02:10	0.229	0.229
-0.001							
R10_S	STORAGE	22.32	22.32	0	02:10	0.0371	0.0371
-0.001							
R2_S	STORAGE	78.86	78.86	0	02:10	0.131	0.131
-0.001							

R3_S	STORAGE	93.25	93.25	0	02:10	0.155	0.155	-0.001
R4_S	STORAGE	59.02	59.02	0	02:10	0.0981	0.0981	-0.001
R5_S	STORAGE	20.83	20.83	0	02:10	0.0346	0.0346	-0.001
R6_S	STORAGE	62.50	62.50	0	02:10	0.104	0.104	-0.001
R7_S	STORAGE	47.62	47.62	0	02:10	0.0791	0.0791	-0.001
R8_S	STORAGE	23.81	23.81	0	02:10	0.0396	0.0396	-0.001
R9_S	STORAGE	31.25	31.25	0	02:10	0.0519	0.0519	-0.001
ST1	STORAGE	0.00	127.31	0	02:10	0	0.196	-0.008
ST10	STORAGE	0.00	47.88	0	02:06	0	0.149	-0.000
ST11	STORAGE	0.00	93.33	0	02:06	0	0.169	-0.012
ST12	STORAGE	0.00	111.71	0	02:09	0	0.193	-0.017
ST5	STORAGE	0.00	113.46	0	02:10	0	0.186	-0.007
ST6	STORAGE	0.00	154.94	0	02:09	0	0.265	-0.006
ST7	STORAGE	0.00	101.24	0	02:10	0	0.179	-0.024
ST8	STORAGE	0.00	91.31	0	02:06	0	0.153	-0.020
ST9	STORAGE	0.00	47.85	0	02:06	0	0.0823	-0.035

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
MH224/ST14	STORAGE	12.81	1.845	0.025
MH232/ST15	STORAGE	33.88	1.148	0.332
MH266	STORAGE	14.12	1.135	0.000
MH270/ST13	STORAGE	25.60	1.675	0.035
MH274	STORAGE	19.42	0.544	0.986
MH288	STORAGE	53.30	0.722	0.868
MH296	STORAGE	47.30	0.652	0.858
MH298	STORAGE	42.46	0.592	0.898
MH410	STORAGE	39.39	0.598	1.002
MH412	STORAGE	28.49	0.438	0.952
MH428	STORAGE	48.10	1.215	0.315
MH432/ST4	STORAGE	40.60	1.095	0.275
MH434	STORAGE	39.42	1.075	0.305
MH436	STORAGE	31.22	0.925	0.235

MH440/ST3	STORAGE	47.53	1.395	0.155
MH446	STORAGE	40.04	1.265	0.095
MH448	STORAGE	32.30	1.115	0.000
ST1	STORAGE	40.03	1.265	0.035
ST10	STORAGE	16.08	1.257	0.473
ST11	STORAGE	24.84	0.694	1.086
ST12	STORAGE	27.21	1.735	0.015
ST5	STORAGE	39.42	1.075	0.275
ST6	STORAGE	39.38	0.598	0.962
ST7	STORAGE	53.30	0.722	0.878
ST8	STORAGE	47.30	0.652	0.878

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Node Flooding Summary
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No nodes were flooded.

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Storage Volume Summary
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Storage Unit	Average Volume 1000 m³	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m³	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
14_(STM)	0.006	33.3	0.0	0.0	0.006	33.4	0 02:06	168.76
15_(STM)	0.006	36.3	0.0	0.0	0.006	36.4	0 02:06	168.78
CB202	0.000	0.0	0.0	0.0	0.000	2.1	0 02:10	10.39
CB210	0.000	3.4	0.0	0.0	0.002	58.8	0 03:12	4.08
CB238	0.000	3.7	0.0	0.0	0.001	38.0	0 06:10	9.23
CB250	0.000	0.1	0.0	0.0	0.000	5.5	0 02:10	22.81
CB256	0.000	0.2	0.0	0.0	0.001	4.2	0 04:00	14.88
CB260	0.000	1.5	0.0	0.0	0.001	36.4	0 03:59	14.46
CB406	0.000	1.1	0.0	0.0	0.000	13.3	0 06:13	14.27
CB424	0.000	0.1	0.0	0.0	0.000	2.4	0 02:10	8.93
CB458	0.000	4.6	0.0	0.0	0.002	48.9	0 06:12	25.22
CB460	0.000	5.7	0.0	0.0	0.002	50.9	0 06:12	41.48
CBMH206	0.000	0.7	0.0	0.0	0.008	16.4	0	0

CBMH208	0.000	3.9	0.0	0.0	0.003	63.2	0
03:11 4.47							
CBMH214/ST17	0.038	12.9	0.0	0.0	0.222	75.7	0
06:10 2.13							
CBMH222	0.001	2.3	0.0	0.0	0.013	43.9	0
03:27 52.60							
CBMH228	0.000	0.0	0.0	0.0	0.002	0.2	0
06:10 69.55							
CBMH230	0.000	1.4	0.0	0.0	0.002	9.5	0
06:10 118.76							
CBMH236	0.000	5.2	0.0	0.0	0.001	43.7	0
06:10 12.17							
CBMH246/ST18	0.020	13.9	0.0	0.0	0.104	73.8	0
04:23 3.84							
CBMH252	0.000	0.4	0.0	0.0	0.002	4.9	0
04:00 36.19							
CBMH254	0.000	2.5	0.0	0.0	0.002	36.0	0
04:00 27.15							
CBMH258	0.000	3.5	0.0	0.0	0.002	49.0	0
04:00 34.13							
CBMH268	0.002	4.3	0.0	0.0	0.040	78.4	0
05:04 113.42							
CBMH276	0.000	0.3	0.0	0.0	0.001	3.0	0
05:40 94.34							
CBMH292	0.000	0.7	0.0	0.0	0.001	2.3	0
06:13 73.95							
CBMH294	0.000	0.3	0.0	0.0	0.001	1.2	0
06:13 87.84							
CBMH402	0.000	3.7	0.0	0.0	0.001	24.6	0
06:14 35.34							
CBMH404	0.000	2.0	0.0	0.0	0.001	17.8	0
06:13 23.53							
CBMH408	0.000	0.4	0.0	0.0	0.001	1.7	0
06:12 84.92							
CBMH414	0.000	0.3	0.0	0.0	0.001	2.2	0
06:12 73.30							
CBMH430	0.000	0.9	0.0	0.0	0.002	5.5	0
06:12 112.70							
CBMH438	0.000	0.3	0.0	0.0	0.001	2.6	0
06:12 53.20							
CBMH444/ST2	0.024	17.3	0.0	0.0	0.108	78.2	0
06:11 147.37							
CBMH450	0.000	0.1	0.0	0.0	0.004	1.5	0
06:11 57.80							
CBMH454	0.000	6.7	0.0	0.0	0.002	53.7	0
06:12 87.18							
CBMH456	0.000	5.8	0.0	0.0	0.001	51.8	0
06:12 36.90							
CBMH470	0.000	0.1	0.0	0.0	0.000	4.7	0
02:10 22.71							
MH200	0.000	5.9	0.0	0.0	0.000	6.0	0
02:10 10.43							
MH200_Dummy	0.000	0.0	0.0	0.0	0.000	0.0	0
00:00 168.74							
MH204	0.001	21.3	0.0	0.0	0.001	21.4	0
02:06 162.11							
MH212	0.001	19.6	0.0	0.0	0.001	20.3	0
02:12 159.50							
MH216	0.001	17.3	0.0	0.0	0.001	18.0	0
02:12 157.67							

MH218	0.000	0.1	0.0	0.0	0.000	2.2	0	
02:22	5.24							
MH220	0.001	18.8	0.0	0.0	0.001	19.8	0	
02:12	152.33							
MH224/ST14	0.008	14.5	0.0	0.0	0.052	100.0	0	
02:26	4.53							
MH226	0.001	16.4	0.0	0.0	0.001	17.6	0	
02:12	150.36							
MH232/ST15	0.026	20.8	0.0	0.0	0.117	95.0	0	
06:10	0.91							
MH234/ST16	0.015	20.5	0.0	0.0	0.068	90.8	0	
06:10	0.78							
MH238	0.000	0.5	0.0	0.0	0.000	7.4	0	
02:10	49.36							
MH240	0.000	6.2	0.0	0.0	0.000	9.1	0	
02:11	50.57							
MH242	0.000	2.2	0.0	0.0	0.000	6.5	0	
02:11	50.70							
MH244	0.000	6.2	0.0	0.0	0.002	60.8	0	
04:23	1.80							
MH262	0.000	10.9	0.0	0.0	0.000	12.6	0	
02:12	99.66							
MH264	0.000	11.8	0.0	0.0	0.002	95.8	0	
05:04	78.79							
MH266	0.000	11.7	0.0	0.0	0.002	100.0	0	
02:21	111.71							
MH270/ST13	0.008	22.8	0.0	0.0	0.036	99.9	0	
05:04	2.75							
MH272	0.000	10.0	0.0	0.0	0.001	49.8	0	
05:41	1.49							
MH274	0.000	6.5	0.0	0.0	0.001	50.2	0	
05:41	93.33							
MH278	0.000	8.4	0.0	0.0	0.000	11.1	0	
02:12	96.29							
MH280	0.000	0.2	0.0	0.0	0.000	4.9	0	
02:23	12.52							
MH282	0.000	0.1	0.0	0.0	0.000	3.6	0	
02:23	7.14							
MH284	0.000	0.1	0.0	0.0	0.000	2.2	0	
02:22	5.38							
MH286	0.000	7.4	0.0	0.0	0.000	10.8	0	
02:12	73.99							
MH288	0.000	15.7	0.0	0.0	0.001	57.2	0	
06:13	29.57							
MH290	0.000	18.2	0.0	0.0	0.001	55.4	0	
06:13	72.88							
MH296	0.000	11.7	0.0	0.0	0.001	52.6	0	
06:13	63.78							
MH298	0.000	11.5	0.0	0.0	0.001	51.4	0	
06:13	30.76							
MH400	0.000	8.9	0.0	0.0	0.001	45.3	0	
06:13	32.03							
MH410	0.000	9.4	0.0	0.0	0.001	47.3	0	
06:12	83.18							
MH412	0.000	9.7	0.0	0.0	0.001	48.6	0	
06:12	72.39							
MH416	0.000	3.4	0.0	0.0	0.000	8.4	0	
02:11	71.96							
MH418	0.000	3.0	0.0	0.0	0.000	9.0	0	
02:11	65.05							

MH420	0.000	0.2	0.0	0.0	0.000	5.9	0	
02:10	15.71							
MH422	0.000	0.2	0.0	0.0	0.000	4.2	0	
02:25	7.82							
MH426_	0.000	1.6	0.0	0.0	0.000	7.9	0	
02:11	49.67							
MH428	0.000	16.0	0.0	0.0	0.002	84.1	0	
06:12	1.80							
MH432/ST4	0.022	23.8	0.0	0.0	0.088	96.2	0	
06:12	62.65							
MH434	0.000	12.1	0.0	0.0	0.002	81.8	0	
06:12	61.51							
MH436	0.000	12.7	0.0	0.0	0.002	85.4	0	
06:12	51.99							
MH440/ST3	0.026	20.2	0.0	0.0	0.126	99.0	0	
06:11	3.08							
MH446	0.000	13.4	0.0	0.0	0.002	94.3	0	
06:11	71.04							
MH448	0.000	14.4	0.0	0.0	0.002	100.0	0	
05:58	56.59							
MH462	0.000	0.3	0.0	0.0	0.000	7.0	0	
02:10	46.39							
MH464	0.000	0.1	0.0	0.0	0.000	4.3	0	
02:10	11.90							
MH466	0.000	0.1	0.0	0.0	0.000	3.9	0	
02:10	11.90							
MH468	0.000	0.1	0.0	0.0	0.000	5.8	0	
02:10	25.73							
PD1	0.000	0.0	0.0	0.0	0.000	0.0	0	
00:00	5.95							
PD2	0.000	0.0	0.0	0.0	0.000	0.0	0	
00:00	5.95							
R-1_Dummy	0.000	0.0	0.0	0.0	0.000	0.0	0	
00:00	38.91							
R1_S	0.003	0.2	0.0	0.0	0.112	6.3	0	
02:31	18.61							
R10_S	0.000	0.0	0.0	0.0	0.014	3.1	0	
02:22	5.24							
R2_S	0.002	0.3	0.0	0.0	0.067	9.9	0	
02:33	9.67							
R3_S	0.002	0.3	0.0	0.0	0.079	9.8	0	
02:33	11.30							
R4_S	0.001	0.2	0.0	0.0	0.048	6.9	0	
02:31	8.16							
R5_S	0.000	0.1	0.0	0.0	0.015	3.0	0	
02:24	3.66							
R6_S	0.001	0.1	0.0	0.0	0.048	6.6	0	
02:25	9.65							
R7_S	0.001	0.1	0.0	0.0	0.036	5.9	0	
02:24	7.82							
R8_S	0.000	0.0	0.0	0.0	0.015	3.4	0	
02:22	5.38							
R9_S	0.000	0.0	0.0	0.0	0.020	3.3	0	
02:22	7.14							
ST1	0.052	30.7	0.0	0.0	0.171	100.0	0	
02:44	10.95							
ST10	0.013	21.4	0.0	0.0	0.063	100.0	0	
02:45	2.48							
ST11	0.031	21.9	0.0	0.0	0.139	97.9	0	
05:41	2.06							

ST12		0.020	26.6	0.0	0.0	0.074	100.0	0
02:11	84.70							
ST5		0.051	30.1	0.0	0.0	0.171	100.0	0
03:27	4.34							
ST6		0.082	28.9	0.0	0.0	0.262	92.1	0
06:12	1.41							
ST7		0.060	34.9	0.0	0.0	0.171	100.0	0
05:16	1.71							
ST8		0.045	31.8	0.0	0.0	0.138	96.8	0
06:13	1.38							
ST9		0.013	21.4	0.0	0.0	0.063	100.0	0
02:45	2.52							

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
HP-MD1	0.00	0.00	0.00	0.000
MAJ-MD	1.44	16.55	74.77	0.068
MAJ-MD2	0.00	0.00	0.00	0.000
MAJ-MD3	0.00	0.00	0.00	0.000
MIN_MD	92.73	8.60	168.78	3.689
OF-Strandherd	6.47	9.81	139.23	0.186
OF-Systemhouse	6.11	1.51	25.14	0.025
System	15.25	36.47	402.52	3.968

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Link Flow Summary
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Link	Type	Maximum |Flow| LPS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
MAJ-CB210(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB210(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB238(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB238(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB250(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB250(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB260(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB260(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(3)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(4)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(5)	CONDUIT	0.00	0 00:00	0.00	0.00	0.09
MAJ-CB424(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

MAJ-CB424(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB458(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB458(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB460(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB460(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB460(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CB460(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH206(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
MAJ-CBMH206(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH208	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH208(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH214(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.11
MAJ-CBMH214(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.07
MAJ-CBMH222(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.09
MAJ-CBMH222(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.11
MAJ-CBMH222(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.09
MAJ-CBMH222(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH228(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH228(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH230(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH230(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.11
MAJ-CBMH236(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH236(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH246(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH246(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH252(1)	CONDUIT	0.08	0	02:33	0.00	0.00	0.00
MAJ-CBMH252(2)	CONDUIT	0.10	0	02:26	0.00	0.00	0.00
MAJ-CBMH254(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH254(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH258(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH258(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH268(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.09
MAJ-CBMH268(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH276(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH276(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.09
MAJ-CBMH292(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH402(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH402(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH404(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH404(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH414(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH414(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH430(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH430(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH438(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH438(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
MAJ-CBMH444(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
MAJ-CBMH444(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.03
MAJ-CBMH450(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.03
MAJ-CBMH450(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH450(3)	CONDUIT	0.29	0	02:31	0.00	0.00	0.03
MAJ-CBMH450(4)	CONDUIT	0.27	0	02:31	0.00	0.00	0.00

MAJ-CBMH454(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
MAJ-CBMH456(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
MAJ-CBMH470(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH470(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.01
MAJ-MD1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-MD2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-MD3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD1(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD1(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD2(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD2(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PD1-Out	CONDUIT	5.95	0	02:10	0.77	0.18	0.29
PD2-Out	CONDUIT	5.95	0	02:10	0.78	0.18	0.29
STM-10_(STM)	CONDUIT	168.78	0	02:12	0.18	0.12	0.99
STM-101_(STM)	CONDUIT	14.27	0	02:10	0.64	0.21	1.00
STM-102_(STM)	CONDUIT	23.53	0	02:10	0.82	0.34	1.00
STM-103_(STM)	CONDUIT	35.34	0	02:08	0.88	0.52	1.00
STM-104_(STM)	CONDUIT	32.03	0	02:08	0.61	0.54	1.00
STM-106_(STM)_1	CONDUIT	30.76	0	02:08	0.44	2.58	1.00
STM-106_(STM)_2	CONDUIT	63.78	0	02:06	0.96	5.34	1.00
STM-108_(STM)	CONDUIT	64.85	0	02:06	0.92	0.97	1.00
STM-109_(STM)	CONDUIT	30.65	0	02:09	0.43	0.45	1.00
STM-11_(STM)	CONDUIT	22.71	0	02:10	0.77	0.40	0.43
STM-113_(STM)	CONDUIT	73.95	0	02:10	1.05	1.09	1.00
STM-115_(STM)_1	CONDUIT	72.88	0	02:10	1.03	6.10	1.00
STM-115_(STM)_2	CONDUIT	28.44	0	02:09	0.40	2.38	1.00
STM-116_(STM)	CONDUIT	73.30	0	02:09	1.14	0.98	1.00
STM-118_(STM)_1	CONDUIT	72.39	0	02:09	1.04	6.06	1.00
STM-118_(STM)_2	CONDUIT	83.18	0	02:05	1.21	6.97	1.00
STM-12_(STM)	CONDUIT	25.73	0	02:10	0.71	0.18	0.28
STM-120_(STM)	CONDUIT	83.88	0	02:05	1.19	1.29	1.00
STM-122_(STM)	CONDUIT	53.20	0	02:10	0.94	0.79	1.00
STM-124_(STM)_1	CONDUIT	51.99	0	02:10	0.74	4.36	1.00
STM-124_(STM)_2	CONDUIT	61.51	0	02:10	0.87	5.15	1.00
STM-125_(STM)	CONDUIT	62.65	0	02:10	0.89	0.98	1.00
STM-126_(STM)	CONDUIT	110.17	0	02:10	1.56	1.64	1.00
STM-127_(STM)	CONDUIT	3.08	0	02:05	0.38	0.05	1.00
STM-13_(1)_(STM)	CONDUIT	49.67	0	02:11	0.57	0.21	0.35
STM-13_(STM)	CONDUIT	46.39	0	02:10	0.62	0.19	0.31
STM-130_(STM)	CONDUIT	25.22	0	02:04	0.78	0.36	1.00
STM-131_(STM)	CONDUIT	36.90	0	02:10	0.77	0.53	1.00
STM-132_(STM)	CONDUIT	87.18	0	02:10	1.23	1.27	1.00
STM-133_(STM)	CONDUIT	75.13	0	02:10	1.06	1.11	1.00
STM-135_(STM)	CONDUIT	72.29	0	02:10	1.02	1.14	1.00
STM-138_(STM)	CONDUIT	41.48	0	02:10	0.65	0.61	1.00
STM-139_(STM)	CONDUIT	57.80	0	02:10	0.97	0.77	1.00
STM-14_(STM)	CONDUIT	65.05	0	02:11	0.68	0.33	0.37
STM-141_(STM)_1	CONDUIT	56.59	0	02:10	0.86	4.74	1.00
STM-141_(STM)_2	CONDUIT	71.04	0	02:10	1.01	5.95	1.00
STM-145_(STM)	CONDUIT	3.84	0	02:04	0.35	0.06	1.00
STM-15_(1)_(STM)	CONDUIT	73.99	0	02:12	0.59	0.30	0.46

STM-15_(STM)	CONDUIT	71.96	0	02:11	0.67	0.31	0.41
STM-16_(STM)	CONDUIT	96.29	0	02:12	0.66	0.39	0.52
STM-17_(STM)	CONDUIT	99.66	0	02:13	0.60	0.45	0.57
STM-18_(1)_(STM)	CONDUIT	152.33	0	02:12	0.46	0.45	0.70
STM-18_(STM)	CONDUIT	150.36	0	02:12	0.48	0.42	0.67
STM-19_(STM)	CONDUIT	157.67	0	02:13	0.46	0.56	0.73
STM-20_(STM)	CONDUIT	159.50	0	02:13	0.45	0.51	0.75
STM-21_(STM)_1	CONDUIT	162.11	0	02:13	0.19	0.18	0.82
STM-21_(STM)_2	CONDUIT	168.74	0	02:12	0.19	0.10	0.87
STM-22_(STM)	CONDUIT	11.90	0	02:10	0.68	0.21	0.30
STM-23_(STM)	CONDUIT	11.90	0	02:10	0.56	0.08	0.19
STM-24_(1)_(STM)	CONDUIT	15.71	0	02:10	0.70	0.27	0.36
STM-24_(STM)	CONDUIT	8.93	0	02:10	0.55	0.13	0.30
STM-26_(STM)	CONDUIT	7.14	0	02:23	0.61	0.11	0.22
STM-27_(STM)	CONDUIT	12.52	0	02:24	0.58	0.15	0.25
STM-44_(STM)	CONDUIT	7.82	0	02:25	0.58	0.13	0.25
STM-55_(STM)	CONDUIT	5.38	0	02:22	0.38	0.05	0.25
STM-58_(STM)	CONDUIT	5.24	0	02:22	0.47	0.05	0.23
STM-59_(STM)	CONDUIT	4.08	0	02:07	0.27	0.03	1.00
STM-60_(STM)	CONDUIT	11.82	0	02:07	0.17	0.03	1.00
STM-62_(STM)	CONDUIT	10.39	0	02:10	0.92	0.17	0.28
STM-63_(STM)	CONDUIT	10.43	0	02:10	0.20	0.11	0.69
STM-64_(STM)	CONDUIT	9.23	0	02:05	0.63	0.13	1.00
STM-65_(STM)_1	CONDUIT	12.17	0	02:06	0.28	0.18	1.00
STM-65_(STM)_2	CONDUIT	43.73	0	02:05	0.62	0.63	1.00
STM-66_(STM)	CONDUIT	68.10	0	02:10	0.43	0.47	1.00
STM-70_(STM)_1	CONDUIT	22.81	0	02:10	0.68	0.34	0.51
STM-70_(STM)_2	CONDUIT	38.91	0	02:10	0.94	0.57	0.57
STM-71_(STM)	CONDUIT	49.36	0	02:10	0.82	0.35	0.41
STM-72_(STM)	CONDUIT	50.70	0	02:11	0.70	0.36	0.46
STM-73_(STM)	CONDUIT	50.57	0	02:11	0.64	0.33	0.50
STM-79_(STM)	CONDUIT	51.33	0	02:05	0.73	0.68	1.00
STM-82_(STM)	CONDUIT	78.71	0	02:10	1.11	1.26	1.00
STM-87_(STM)	CONDUIT	14.46	0	02:08	0.78	0.21	1.00
STM-88_(STM)_1	CONDUIT	34.13	0	02:08	0.48	2.86	1.00
STM-88_(STM)_2	CONDUIT	17.17	0	02:09	0.24	1.44	1.00
STM-89_(STM)_1	CONDUIT	13.55	0	02:07	0.34	1.14	1.00
STM-89_(STM)_2	CONDUIT	34.55	0	02:05	0.49	2.89	1.00
STM-9_(STM)	CONDUIT	168.76	0	02:12	0.18	0.07	0.93
STM-91_(STM)	CONDUIT	14.88	0	02:10	0.87	0.16	1.00
STM-92_(STM)	CONDUIT	77.22	0	02:11	1.09	1.16	1.00
STM-94_(STM)	CONDUIT	113.42	0	02:09	1.65	1.55	1.00
STM-96_(STM)_1	CONDUIT	111.71	0	02:09	1.58	9.36	1.00
STM-96_(STM)_2	CONDUIT	84.70	0	02:11	1.20	7.09	1.00
STM-97_(STM)	CONDUIT	94.34	0	02:06	1.41	1.45	1.00
STM-99_(STM)_1	CONDUIT	93.33	0	02:06	1.32	7.82	1.00
STM-99_(STM)_2	CONDUIT	2.06	0	02:10	0.30	0.17	1.00
R1_OvF	WEIR	0.00	0	00:00			0.00
R10_OvF	WEIR	0.00	0	00:00			0.00
R2_OvF	WEIR	0.17	0	02:33			0.00
R3_OvF	WEIR	0.00	0	00:00			0.00
R4_OvF	WEIR	0.56	0	02:31			0.01
R5_OvF	WEIR	0.00	0	00:00			0.00
R6_OvF	WEIR	0.00	0	00:00			0.00
R7_OvF	WEIR	0.00	0	00:00			0.00
R8_OvF	WEIR	0.00	0	00:00			0.00
R9_OvF	WEIR	0.00	0	00:00			0.00

O-CBMH206	DUMMY	2.04	0	03:12
O-CBMH214	DUMMY	2.13	0	06:10
O-CBMH222	DUMMY	2.13	0	03:27
O-CBMH228	DUMMY	1.84	0	06:10
O-CBMH252	DUMMY	2.97	0	04:00
O-CBMH408	DUMMY	1.45	0	06:12
O-MH244	DUMMY	1.80	0	04:23
O-MH264	DUMMY	2.07	0	05:04
O-MH272	DUMMY	1.49	0	05:41
O-MH288	DUMMY	1.50	0	06:13
O-MH428	DUMMY	1.80	0	06:12
O-MH440	DUMMY	3.08	0	06:11
R10-Out	DUMMY	5.24	0	02:22
R1-Out	DUMMY	18.61	0	02:31
R2-Out	DUMMY	9.50	0	02:25
R3-Out	DUMMY	11.30	0	02:32
R4-Out	DUMMY	7.60	0	02:20
R5-Out	DUMMY	3.66	0	02:24
R6-Out	DUMMY	9.65	0	02:25
R7-Out	DUMMY	7.82	0	02:24
R8-Out	DUMMY	5.38	0	02:22
R9-Out	DUMMY	7.14	0	02:22

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
MAJ-CB210(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB210(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB238(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB238(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB250(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB250(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB260(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB260(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB406(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAJ-CB406(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

MAJ-CB406(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB406(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB406(5)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB424(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB424(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB458(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB458(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH206(1)	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH206(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH208	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH208(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH214(1)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH214(2)	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(1)	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(2)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(3)	1.00	0.98	0.02	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH228(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH228(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH230(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH230(2)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH236(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH236(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH246(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH246(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH252(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									

MAJ-CBMH252(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH254(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH254(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH258(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH258(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH268(1)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH268(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH276(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH276(2)	1.00	0.95	0.05	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH402(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH402(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH404(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH404(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH414(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH414(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH430(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH430(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH438(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH438(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(4)	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(1)	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(3)	1.00	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00									

MAJ-CBMH450(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH470(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH470(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD1(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD1(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD2(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD2(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
PD1-Out	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
PD2-Out	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-10_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-101_(STM)	1.00	0.00	0.04	0.00	0.13	0.00	0.00	0.83	0.88
0.00									
STM-102_(STM)	1.00	0.00	0.04	0.00	0.18	0.00	0.00	0.77	0.82
0.00									
STM-103_(STM)	1.00	0.00	0.07	0.00	0.26	0.00	0.00	0.67	0.74
0.00									
STM-104_(STM)	1.00	0.62	0.02	0.00	0.35	0.00	0.00	0.01	0.64
0.00									
STM-106_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-106_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-108_(STM)	1.00	0.00	0.00	0.00	0.43	0.00	0.00	0.57	0.02
0.00									
STM-109_(STM)	1.00	0.00	0.00	0.00	0.44	0.00	0.00	0.56	0.01
0.00									
STM-11_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									

STM-113_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-115_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-115_(STM)_2	1.00	0.00	0.00	0.00	0.44	0.00	0.00	0.56	0.00	0.00
STM-116_(STM)	1.00	0.00	0.01	0.00	0.26	0.00	0.00	0.74	0.73	0.00
STM-118_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-118_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-12_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-120_(STM)	1.00	0.00	0.00	0.00	0.35	0.00	0.00	0.65	0.00	0.00
STM-122_(STM)	1.00	0.00	0.01	0.00	0.25	0.00	0.00	0.75	0.75	0.00
STM-124_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.00
STM-124_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-125_(STM)	1.00	0.00	0.00	0.00	0.32	0.00	0.00	0.68	0.01	0.00
STM-126_(STM)	1.00	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.00	0.00
STM-127_(STM)	1.00	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.00	0.00
STM-13_(1)_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.24	0.00
STM-13_(STM)	1.00	0.00	0.71	0.00	0.29	0.00	0.00	0.00	0.71	0.00
STM-130_(STM)	1.00	0.00	0.02	0.00	0.19	0.00	0.00	0.79	0.81	0.00
STM-131_(STM)	1.00	0.00	0.01	0.00	0.23	0.00	0.00	0.76	0.76	0.00
STM-132_(STM)	1.00	0.00	0.05	0.00	0.28	0.00	0.00	0.67	0.74	0.00
STM-133_(STM)	1.00	0.00	0.00	0.00	0.33	0.00	0.00	0.67	0.01	0.00
STM-135_(STM)	1.00	0.00	0.00	0.00	0.31	0.00	0.00	0.69	0.01	0.00
STM-138_(STM)	1.00	0.00	0.02	0.00	0.25	0.00	0.00	0.73	0.77	0.00
STM-139_(STM)	1.00	0.00	0.00	0.00	0.25	0.00	0.00	0.75	0.74	0.00
STM-14_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-141_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.00
STM-141_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-145_(STM)	1.00	0.00	0.00	0.00	0.15	0.00	0.00	0.85	0.00	0.00
STM-15_(1)_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-15_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-16_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00

STM-17_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-18_(1)_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-18_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-19_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-20_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-21_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-21_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-22_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-23_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-24_(1)_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-24_(STM)	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.97	0.03	0.00
STM-26_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-27_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-44_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-55_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
STM-58_(STM)	1.00	0.00	0.94	0.00	0.06	0.00	0.00	0.00	1.00	0.00
STM-59_(STM)	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.93	0.00
STM-60_(STM)	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.00	0.00
STM-62_(STM)	1.00	0.00	0.99	0.00	0.01	0.00	0.00	0.00	0.99	0.00
STM-63_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-64_(STM)	1.00	0.00	0.01	0.00	0.15	0.00	0.00	0.84	0.84	0.00
STM-65_(STM)_1	1.00	0.00	0.03	0.00	0.21	0.00	0.00	0.75	0.80	0.00
STM-65_(STM)_2	1.00	0.00	0.00	0.00	0.25	0.00	0.00	0.75	0.01	0.00
STM-66_(STM)	1.00	0.00	0.00	0.00	0.26	0.00	0.00	0.74	0.00	0.00
STM-70_(STM)_1	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	1.00	0.00
STM-70_(STM)_2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-71_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
STM-72_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.00
STM-73_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-79_(STM)	1.00	0.00	0.00	0.00	0.09	0.00	0.00	0.91	0.00	0.00

STM-82_(STM)	1.00	0.00	0.00	0.00	0.25	0.00	0.00	0.75	0.00
0.00									
STM-87_(STM)	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.94
0.00									
STM-88_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-88_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-89_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-89_(STM)_2	1.00	0.00	0.00	0.00	0.13	0.00	0.00	0.87	0.00
0.00									
STM-9_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-91_(STM)	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.95	0.94
0.00									
STM-92_(STM)	1.00	0.00	0.00	0.00	0.20	0.00	0.00	0.80	0.01
0.00									
STM-94_(STM)	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.07
0.00									
STM-96_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-96_(STM)_2	1.00	0.00	0.00	0.00	0.20	0.00	0.00	0.80	0.00
0.00									
STM-97_(STM)	1.00	0.00	0.00	0.00	0.16	0.00	0.00	0.84	0.83
0.00									
STM-99_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-99_(STM)_2	1.00	0.00	0.00	0.00	0.21	0.00	0.00	0.79	0.00
0.00									

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Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
STM-10_(STM)	0.01	0.01	192.00	0.01	0.01
STM-101_(STM)	0.85	0.85	11.31	0.01	0.01
STM-102_(STM)	11.99	11.99	21.41	0.01	0.01
STM-103_(STM)	25.52	25.52	37.07	0.01	0.01
STM-104_(STM)	39.35	39.35	42.46	0.01	0.01
STM-106_(STM)_1	47.30	47.30	47.30	0.20	0.13
STM-106_(STM)_2	47.30	47.30	47.30	0.44	0.01
STM-108_(STM)	47.30	47.30	49.80	0.01	0.01
STM-109_(STM)	50.66	50.66	53.30	0.01	0.01
STM-113_(STM)	63.24	63.24	66.59	0.10	0.19
STM-115_(STM)_1	53.30	53.30	53.30	0.52	0.34
STM-115_(STM)_2	53.30	53.30	53.30	0.20	0.01
STM-116_(STM)	27.22	27.31	28.48	0.01	0.06
STM-118_(STM)_1	39.38	39.38	39.38	0.52	0.30
STM-118_(STM)_2	39.38	39.38	39.38	0.55	0.01
STM-120_(STM)	39.38	39.38	42.42	0.13	0.01
STM-122_(STM)	29.70	29.71	31.22	0.01	0.05

STM-124_(STM)_1	39.41	39.42	39.41	0.37	0.30
STM-124_(STM)_2	39.41	39.41	39.42	0.47	0.03
STM-125_(STM)	39.42	39.42	40.60	0.01	0.01
STM-126_(STM)	43.59	43.59	45.46	0.17	0.01
STM-127_(STM)	46.10	46.10	48.10	0.01	0.01
STM-130_(STM)	21.34	21.34	25.51	0.01	0.01
STM-131_(STM)	28.16	28.16	30.46	0.01	0.01
STM-132_(STM)	33.34	33.34	43.99	0.13	0.13
STM-133_(STM)	44.56	44.56	47.53	0.09	0.09
STM-135_(STM)	40.03	40.03	41.16	0.13	0.01
STM-138_(STM)	28.62	28.62	32.85	0.01	0.01
STM-139_(STM)	31.34	31.35	32.29	0.01	0.06
STM-141_(STM)_1	40.03	40.03	40.03	0.38	0.29
STM-141_(STM)_2	40.03	40.03	40.03	0.49	0.03
STM-145_(STM)	19.16	19.16	20.47	0.01	0.01
STM-59_(STM)	7.51	7.51	7.82	0.01	0.01
STM-60_(STM)	7.10	7.10	7.36	0.01	0.01
STM-64_(STM)	18.78	18.78	21.09	0.01	0.01
STM-65_(STM)_1	26.10	26.10	32.75	0.01	0.01
STM-65_(STM)_2	33.12	33.12	34.68	0.01	0.01
STM-66_(STM)	31.29	31.29	33.13	0.01	0.01
STM-79_(STM)	12.81	12.81	13.02	0.01	0.01
STM-82_(STM)	33.88	33.88	34.68	0.13	0.01
STM-87_(STM)	4.78	4.78	7.83	0.01	0.01
STM-88_(STM)_1	16.08	16.08	16.08	0.21	0.26
STM-88_(STM)_2	16.08	16.08	16.08	0.13	0.09
STM-89_(STM)_1	16.08	16.08	16.08	0.07	0.20
STM-89_(STM)_2	16.08	16.08	16.08	0.23	0.03
STM-91_(STM)	3.68	3.68	5.28	0.01	0.01
STM-92_(STM)	25.60	25.60	27.21	0.01	0.01
STM-94_(STM)	13.41	13.53	14.12	0.16	0.08
STM-96_(STM)_1	27.21	27.21	27.21	0.43	0.34
STM-96_(STM)_2	27.21	27.21	27.21	0.26	0.31
STM-97_(STM)	18.43	18.51	19.42	0.15	0.11
STM-99_(STM)_1	24.84	24.85	24.84	0.67	0.45
STM-99_(STM)_2	24.84	24.84	24.84	0.01	0.01

Analysis begun on: Fri Jan 23 10:32:48 2026
Analysis ended on: Fri Jan 23 10:33:21 2026
Total elapsed time: 00:00:33

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  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.2 (Build 5.2.4)
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  Boundary Conditions:
  100-yr = 93.88m
  25-yr = 93.69m
  WARNING 03: negative offset ignored for Link MAJ-CBMH454(3)
  WARNING 03: negative offset ignored for Link MAJ-CBMH454(4)
  WARNING 04: minimum elevation drop used for Conduit STM-106_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-106_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-115_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-115_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-118_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-118_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-124_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-124_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-141_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-141_(STM)_2
  WARNING 03: negative offset ignored for Link STM-55_(STM)
  WARNING 04: minimum elevation drop used for Conduit STM-88_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-88_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-89_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-89_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-96_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-96_(STM)_2
  WARNING 04: minimum elevation drop used for Conduit STM-99_(STM)_1
  WARNING 04: minimum elevation drop used for Conduit STM-99_(STM)_2

  *************
  Element Count
  *************
  Number of rain gages ...... 1
  Number of subcatchments ... 51
  Number of nodes ........... 158
  Number of links ........... 207
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ------------------------------------------------------------------------
  Raingage             3-C6-2                       INTENSITY   10 min.


  ********************
  Subcatchment Summary
  ********************
  Name                        Area     Width   %Imperv    %Slope Rain Gage
Outlet
  ------------------------------------------------------------------------------
--------------------------
  A0-1                        0.06    101.27     23.00   15.0000 Raingage
OF-Systemhouse
```

A0-2	0.36	122.48	41.00	2.5000	Raingage
OF-Strandherd					
A0-3	0.22	63.56	0.00	15.0000	Raingage
MAJ-MD					
A1-1	0.05	40.59	51.00	1.2500	Raingage
CBMH470					
A1-2	0.01	16.62	100.00	0.5000	Raingage
PD1					
A1-3	0.01	19.05	100.00	0.5000	Raingage
PD2					
A1-4	0.02	16.30	100.00	1.0000	Raingage
CB424					
A1-5	0.05	17.48	100.00	2.0000	Raingage
CB250					
A1-6	0.03	32.95	0.00	3.0000	Raingage
CB202					
A2-1	0.05	24.24	97.00	1.5000	Raingage
CB458					
A2-10	0.03	26.06	73.00	1.5000	Raingage
CB406					
A2-11	0.02	12.36	100.00	1.0000	Raingage
CBMH404					
A2-12	0.03	21.29	77.00	1.0000	Raingage
CBMH402					
A2-13	0.15	60.58	87.00	1.5000	Raingage
CBMH292					
A2-14	0.17	65.66	96.00	1.7500	Raingage
CBMH408					
A2-15	0.18	78.91	96.00	1.5000	Raingage
CBMH294					
A2-16	0.19	72.06	93.00	1.5000	Raingage
CBMH276					
A2-17	0.23	97.92	93.00	1.5000	Raingage
CBMH268					
A2-18	0.03	29.77	100.00	1.5000	Raingage
CB260					
A2-19.1	0.07	28.09	100.00	2.5000	Raingage
CBMH252					
A2-19.2	0.03	11.19	100.00	2.5000	Raingage
CB256					
A2-19.3	0.03	20.12	100.00	2.5000	Raingage
CBMH254					
A2-19.4	0.04	20.73	100.00	2.5000	Raingage
CBMH258					
A2-2	0.04	29.82	71.00	1.5000	Raingage
CBMH456					
A2-20	0.16	78.97	94.00	1.0000	Raingage
CBMH246/ST18					
A2-21	0.02	31.36	79.00	1.0000	Raingage
CB238					
A2-22	0.02	22.12	93.00	1.5000	Raingage
CBMH236					
A2-23	0.11	49.89	96.00	1.5000	Raingage
CBMH230					
A2-24	0.15	46.10	79.00	1.5000	Raingage
CBMH228					
A2-25	0.11	48.37	96.00	1.5000	Raingage
CBMH222					
A2-26	0.31	75.92	97.00	1.5000	Raingage
CBMH214/ST17					

A2-27	0.02	20.86	80.00	1.0000	Raingage
CB210					
A2-28	0.02	23.03	84.00	1.5000	Raingage
CBMH208					
A2-29	0.06	65.11	79.00	2.0000	Raingage
CBMH206					
A2-3	0.10	32.88	63.00	1.5000	Raingage
CB460					
A2-4	0.03	27.54	97.00	1.5000	Raingage
CBMH454					
A2-5	0.27	61.28	94.00	1.5000	Raingage
CBMH444/ST2					
A2-6	0.23	74.98	97.00	1.5000	Raingage
CBMH430					
A2-7	0.12	49.84	87.00	1.5000	Raingage
CBMH450					
A2-8	0.11	38.54	86.00	1.5000	Raingage
CBMH438					
A2-9	0.15	64.30	87.00	1.5000	Raingage
CBMH414					
R-1	0.28	278.00	100.00	1.5000	Raingage
R1_S					
R-10	0.04	45.00	100.00	1.5000	Raingage
R10_S					
R-2	0.16	159.00	100.00	1.5000	Raingage
R2_S					
R-3	0.19	188.00	100.00	1.5000	Raingage
R3_S					
R-4	0.12	119.00	100.00	1.5000	Raingage
R4_S					
R-5	0.04	42.00	100.00	1.5000	Raingage
R5_S					
R-6	0.13	126.00	100.00	1.5000	Raingage
R6_S					
R-7	0.10	96.00	100.00	1.5000	Raingage
R7_S					
R-8	0.05	48.00	100.00	1.5000	Raingage
R8_S					
R-9	0.06	63.00	100.00	1.5000	Raingage
R9_S					

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Node Summary
****

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
HP-A1-1	JUNCTION	96.60	1.00	0.0	
HP-A1-2	JUNCTION	96.85	1.00	0.0	
HP-A1-3	JUNCTION	96.75	1.00	0.0	
HP-A1-4	JUNCTION	96.45	1.00	0.0	
HP-A1-5	JUNCTION	96.50	1.00	0.0	
HP-A2-1	JUNCTION	96.65	1.00	0.0	
HP-A2-10(1)	JUNCTION	96.41	1.00	0.0	
HP-A2-10(2)	JUNCTION	96.40	1.00	0.0	
HP-A2-11	JUNCTION	96.42	1.00	0.0	
HP-A2-12	JUNCTION	96.40	1.00	0.0	
HP-A2-13(1)	JUNCTION	96.30	1.00	0.0	

HP-A2-13(2)	JUNCTION	96.35	1.00	0.0
HP-A2-16	JUNCTION	96.15	1.00	0.0
HP-A2-17	JUNCTION	96.20	1.00	0.0
HP-A2-18	JUNCTION	96.65	1.00	0.0
HP-A2-19.1	JUNCTION	96.43	1.00	0.0
HP-A2-19.3	JUNCTION	96.50	1.00	0.0
HP-A2-19.4	JUNCTION	96.65	1.00	0.0
HP-A2-2(1)	JUNCTION	96.45	1.00	0.0
HP-A2-2(2)	JUNCTION	96.50	1.00	0.0
HP-A2-20	JUNCTION	96.50	1.00	0.0
HP-A2-21	JUNCTION	96.32	1.00	0.0
HP-A2-22	JUNCTION	96.37	1.00	0.0
HP-A2-23	JUNCTION	96.30	1.00	0.0
HP-A2-24	JUNCTION	96.20	1.00	0.0
HP-A2-25	JUNCTION	96.35	1.00	0.0
HP-A2-25(2)	JUNCTION	96.22	1.00	0.0
HP-A2-26	JUNCTION	96.25	1.00	0.0
HP-A2-27	JUNCTION	96.40	1.00	0.0
HP-A2-28	JUNCTION	96.32	1.00	0.0
HP-A2-29	JUNCTION	96.45	1.00	0.0
HP-A2-3(1)	JUNCTION	96.43	1.00	0.0
HP-A2-3(2)	JUNCTION	96.45	1.00	0.0
HP-A2-4(1)	JUNCTION	96.50	1.00	0.0
HP-A2-4(2)	JUNCTION	96.55	1.00	0.0
HP-A2-5(1)	JUNCTION	96.35	1.00	0.0
HP-A2-5(2)	JUNCTION	96.25	1.00	0.0
HP-A2-6	JUNCTION	96.30	1.00	0.0
HP-A2-7(1)	JUNCTION	96.30	1.00	0.0
HP-A2-7(2)	JUNCTION	96.38	1.00	0.0
HP-A2-8	JUNCTION	96.27	1.00	0.0
HP-A2-9	JUNCTION	96.35	1.00	0.0
HP-MD1	OUTFALL	96.43	1.00	0.0
MAJ-MD	OUTFALL	96.43	0.00	0.0
MAJ-MD2	OUTFALL	96.41	1.00	0.0
MAJ-MD3	OUTFALL	96.63	1.00	0.0
MIN_MD	OUTFALL	93.00	0.86	0.0
OF-Strandherd	OUTFALL	95.49	0.00	0.0
OF-Systemhouse	OUTFALL	95.88	0.00	0.0
14_(STM)	STORAGE	93.09	2.37	0.0
15_(STM)	STORAGE	93.03	2.34	0.0
CB202	STORAGE	93.97	3.38	0.0
CB210	STORAGE	94.40	2.88	0.0
CB238	STORAGE	94.68	2.60	0.0
CB250	STORAGE	94.35	2.17	0.0
CB256	STORAGE	94.96	1.54	0.0
CB260	STORAGE	94.90	2.55	0.0
CB406	STORAGE	94.91	2.35	0.0
CB424	STORAGE	94.37	2.99	0.0
CB458	STORAGE	94.90	2.38	0.0
CB460	STORAGE	94.73	2.62	0.0
CBMH206	STORAGE	93.98	2.97	0.0
CBMH208	STORAGE	94.19	3.01	0.0
CBMH214/ST17	STORAGE	93.84	3.11	0.0
CBMH222	STORAGE	93.74	3.26	0.0
CBMH228	STORAGE	93.94	3.06	0.0
CBMH230	STORAGE	94.14	2.86	0.0
CBMH236	STORAGE	94.44	2.81	0.0

CBMH246/ST18	STORAGE	94.10	3.20	0.0
CBMH252	STORAGE	94.11	3.04	0.0
CBMH254	STORAGE	94.27	3.03	0.0
CBMH258	STORAGE	94.27	3.18	0.0
CBMH268	STORAGE	94.74	2.21	0.0
CBMH276	STORAGE	94.25	2.70	0.0
CBMH292	STORAGE	94.10	2.95	0.0
CBMH294	STORAGE	94.23	2.77	0.0
CBMH402	STORAGE	94.56	2.69	0.0
CBMH404	STORAGE	94.76	2.59	0.0
CBMH408	STORAGE	94.05	2.95	0.0
CBMH414	STORAGE	94.42	2.63	0.0
CBMH430	STORAGE	94.39	2.66	0.0
CBMH438	STORAGE	94.68	2.32	0.0
CBMH444/ST2	STORAGE	94.35	2.70	0.0
CBMH450	STORAGE	94.67	2.33	0.0
CBMH454	STORAGE	94.63	2.67	0.0
CBMH456	STORAGE	94.74	2.56	0.0
CBMH470	STORAGE	94.34	3.11	0.0
MH200	STORAGE	93.70	3.03	0.0
MH200_Dummy	STORAGE	93.14	2.77	0.0
MH204	STORAGE	93.21	3.15	0.0
MH212	STORAGE	93.34	2.75	0.0
MH216	STORAGE	93.36	3.01	0.0
MH218	STORAGE	94.18	2.18	0.0
MH220	STORAGE	93.39	2.61	0.0
MH224/ST14	STORAGE	93.90	2.30	0.0
MH226	STORAGE	93.42	2.80	0.0
MH232/ST15	STORAGE	94.10	1.90	0.0
MH234/ST16	STORAGE	94.10	2.08	0.0
MH238	STORAGE	93.93	2.50	0.0
MH240	STORAGE	93.72	2.59	0.0
MH242	STORAGE	93.82	2.94	0.0
MH244	STORAGE	94.04	2.74	0.0
MH262	STORAGE	93.59	2.67	0.0
MH264	STORAGE	93.95	2.28	0.0
MH266	STORAGE	94.10	1.95	0.0
MH270/ST13	STORAGE	93.95	2.22	0.0
MH272	STORAGE	93.84	2.46	0.0
MH274	STORAGE	94.07	1.98	0.0
MH278	STORAGE	93.66	2.64	0.0
MH280	STORAGE	94.05	2.23	0.0
MH282	STORAGE	94.23	1.94	0.0
MH284	STORAGE	94.23	2.03	0.0
MH286	STORAGE	93.70	2.45	0.0
MH288	STORAGE	94.06	2.03	0.0
MH290	STORAGE	94.07	2.08	0.0
MH296	STORAGE	94.27	1.81	0.0
MH298	STORAGE	94.27	1.85	0.0
MH400	STORAGE	94.37	1.88	0.0
MH410	STORAGE	94.24	1.90	0.0
MH412	STORAGE	94.24	1.85	0.0
MH416	STORAGE	93.79	2.78	0.0
MH418	STORAGE	93.81	2.50	0.0
MH420	STORAGE	94.24	2.01	0.0
MH422	STORAGE	94.36	1.94	0.0
MH426_	STORAGE	93.85	2.56	0.0

MH428	STORAGE	94.21	1.98	0.0
MH432/ST4	STORAGE	94.30	1.85	0.0
MH434	STORAGE	94.50	1.68	0.0
MH436	STORAGE	94.50	1.61	0.0
MH440/ST3	STORAGE	94.22	2.00	0.0
MH446	STORAGE	94.50	1.66	0.0
MH448	STORAGE	94.50	1.56	0.0
MH462	STORAGE	93.89	2.62	0.0
MH464	STORAGE	94.12	2.29	0.0
MH466	STORAGE	94.38	2.49	0.0
MH468	STORAGE	94.12	2.49	0.0
PD1	STORAGE	94.60	3.20	0.0
PD2	STORAGE	94.65	3.05	0.0
R-1_Dummy	STORAGE	94.24	1.65	0.0
R1_S	STORAGE	98.00	0.50	0.0
R10_S	STORAGE	98.00	0.50	0.0
R2_S	STORAGE	98.00	0.50	0.0
R3_S	STORAGE	98.00	0.50	0.0
R4_S	STORAGE	98.00	0.50	0.0
R5_S	STORAGE	98.00	0.50	0.0
R6_S	STORAGE	98.00	0.50	0.0
R7_S	STORAGE	98.00	0.50	0.0
R8_S	STORAGE	98.00	0.50	0.0
R9_S	STORAGE	98.00	0.50	0.0
ST1	STORAGE	94.35	1.75	0.0
ST10	STORAGE	94.12	2.18	0.0
ST11	STORAGE	93.95	2.20	0.0
ST12	STORAGE	93.95	2.20	0.0
ST5	STORAGE	94.35	1.80	0.0
ST6	STORAGE	94.09	2.01	0.0
ST7	STORAGE	94.05	2.05	0.0
ST8	STORAGE	94.12	1.98	0.0
ST9	STORAGE	94.12	2.28	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	% Slope	Roughness
MAJ-CB210(1)	CB210	HP-A2-27	CONDUIT	2.0	- 6.0108	0.0130
MAJ-CB210(2)	HP-A2-27	CB238	CONDUIT	2.0	6.0108	0.0130
MAJ-CB238(1)	CB238	HP-A2-21	CONDUIT	2.0	- 2.0004	0.0130
MAJ-CB238(2)	HP-A2-21	CBMH236	CONDUIT	2.0	3.5021	0.0130
MAJ-CB250(1)	CB250	HP-A1-5	CONDUIT	2.0	- 56.2106	0.0130
MAJ-CB250(2)	HP-A1-5	CBMH252	CONDUIT	2.0	17.7743	0.0130
MAJ-CB260(1)	CB260	HP-A2-18	CONDUIT	2.0	- 10.0504	0.0130
MAJ-CB260(2)	HP-A2-18	CBMH258	CONDUIT	2.0	10.0504	0.0130

MAJ-CB406(1)	CB406	HP-A2-10(1)	CONDUIT	2.0	-	8.0257 0.0130
MAJ-CB406(2)	HP-A2-10(1)	CBMH404	CONDUIT	2.0		3.0014 0.0130
MAJ-CB406(3)	CB406	HP-A2-10(2)	CONDUIT	2.0	-	7.5212 0.0130
MAJ-CB406(4)	HP-A2-10(2)	CBMH294	CONDUIT	2.0		20.4124 0.0130
MAJ-CB406(5)	HP-A2-10(2)	CBMH268	CONDUIT	2.0		23.0921 0.0130
MAJ-CB424(1)	CB424	HP-A1-4	CONDUIT	2.0	-	4.0032 0.0130
MAJ-CB424(2)	HP-A1-4	CBMH438	CONDUIT	2.0		23.0921 0.0130
MAJ-CB458(1)	CB458	HP-A2-1	CONDUIT	2.0	-	18.8249 0.0130
MAJ-CB458(2)	HP-A2-1	CB260	CONDUIT	2.0		10.0504 0.0130
MAJ-CB460(1)	CB460	HP-A2-3(1)	CONDUIT	2.0	-	4.0032 0.0130
MAJ-CB460(2)	HP-A2-3(1)	CBMH454	CONDUIT	2.0		6.5138 0.0130
MAJ-CB460(3)	CB460	HP-A2-3(2)	CONDUIT	2.0	-	5.0063 0.0130
MAJ-CB460(4)	HP-A2-3(2)	CB458	CONDUIT	2.0		8.5309 0.0130
MAJ-CBMH206(1)	CBMH206	HP-A2-29	CONDUIT	2.0	-	25.8199 0.0130
MAJ-CBMH206(2)	HP-A2-29	CBMH208	CONDUIT	2.0		12.5988 0.0130
MAJ-CBMH208	CBMH208	HP-A2-28	CONDUIT	2.0	-	6.0108 0.0130
MAJ-CBMH208(2)	HP-A2-28	CB210	CONDUIT	2.0		2.0004 0.0130
MAJ-CBMH214(1)	CBMH214/ST17	HP-A2-26	CONDUIT	2.0	-	15.1717 0.0130
MAJ-CBMH214(2)	HP-A2-26	CBMH206	CONDUIT	2.0		15.1717 0.0130
MAJ-CBMH222(1)	CBMH222	HP-A2-25	CONDUIT	2.0	-	17.7743 0.0130
MAJ-CBMH222(2)	HP-A2-25	CBMH214/ST17	CONDUIT	2.0		20.4124 0.0130
MAJ-CBMH222(3)	CBMH222	HP-A2-25(2)	CONDUIT	2.0	-	11.0672 0.0130
MAJ-CBMH222(4)	HP-A2-25(2)	CBMH230	CONDUIT	2.0		11.0672 0.0130
MAJ-CBMH228(1)	CBMH228	HP-A2-24	CONDUIT	2.0	-	10.0504 0.0130
MAJ-CBMH228(2)	HP-A2-24	CBMH230	CONDUIT	2.0		10.0504 0.0130
MAJ-CBMH230(1)	CBMH230	HP-A2-23	CONDUIT	2.0	-	15.1717 0.0130
MAJ-CBMH230(2)	HP-A2-23	CBMH214/ST17	CONDUIT	2.0		17.7743 0.0130
MAJ-CBMH236(1)	CBMH236	HP-A2-22	CONDUIT	2.0	-	6.0108 0.0130
MAJ-CBMH236(2)	HP-A2-22	CBMH230	CONDUIT	2.0		18.8249 0.0130
MAJ-CBMH246(1)	CBMH246/ST18	HP-A2-20	CONDUIT	2.0	-	25.8199 0.0130

MAJ-CBMH246(2)	HP-A2-20	CBMH228	CONDUIT	2.0	25.8199 0.0130
MAJ-CBMH252(1)	CBMH252	HP-A2-19.1	CONDUIT	2.0	- 14.1393 0.0130
MAJ-CBMH252(2)	HP-A2-19.1	CBMH246/ST18	CONDUIT	2.0	22.0148 0.0130
MAJ-CBMH254(1)	CBMH254	HP-A2-19.3	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH254(2)	HP-A2-19.3	CBMH252	CONDUIT	2.0	17.7743 0.0130
MAJ-CBMH258(1)	CBMH258	HP-A2-19.4	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH258(2)	HP-A2-19.4	CBMH254	CONDUIT	2.0	17.7743 0.0130
MAJ-CBMH268(1)	CBMH268	HP-A2-17	CONDUIT	2.0	- 12.5988 0.0130
MAJ-CBMH268(2)	HP-A2-17	CBMH228	CONDUIT	2.0	10.0504 0.0130
MAJ-CBMH276(1)	CBMH276	HP-A2-16	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH276(2)	HP-A2-16	CBMH268	CONDUIT	2.0	10.0504 0.0130
MAJ-CBMH292(1)	CBMH292	HP-A2-13(1)	CONDUIT	2.0	- 12.5988 0.0130
MAJ-CBMH292(2)	HP-A2-13(1)	CBMH414	CONDUIT	2.0	12.5988 0.0130
MAJ-CBMH292(3)	CBMH292	HP-A2-13(2)	CONDUIT	2.0	- 15.1717 0.0130
MAJ-CBMH292(4)	HP-A2-13(2)	CBMH294	CONDUIT	2.0	17.7743 0.0130
MAJ-CBMH402(1)	CBMH402	HP-A2-12	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH402(2)	HP-A2-12	CBMH292	CONDUIT	2.0	17.7743 0.0130
MAJ-CBMH404(1)	CBMH404	HP-A2-11	CONDUIT	2.0	- 3.5021 0.0130
MAJ-CBMH404(2)	HP-A2-11	CBMH402	CONDUIT	2.0	8.5309 0.0130
MAJ-CBMH414(1)	CBMH414	HP-A2-9	CONDUIT	2.0	- 15.1717 0.0130
MAJ-CBMH414(2)	HP-A2-9	CBMH408	CONDUIT	2.0	17.7743 0.0130
MAJ-CBMH430(1)	CBMH430	HP-A2-6	CONDUIT	2.0	- 12.5988 0.0130
MAJ-CBMH430(2)	HP-A2-6	CBMH438	CONDUIT	2.0	15.1717 0.0130
MAJ-CBMH438(1)	CBMH438	HP-A2-8	CONDUIT	2.0	- 13.6247 0.0130
MAJ-CBMH438(2)	HP-A2-8	CBMH292	CONDUIT	2.0	11.0672 0.0130
MAJ-CBMH444(1)	CBMH444/ST2	HP-A2-5(1)	CONDUIT	2.0	- 15.1717 0.0130
MAJ-CBMH444(2)	HP-A2-5(1)	CBMH430	CONDUIT	2.0	15.1717 0.0130
MAJ-CBMH444(3)	CBMH444/ST2	HP-A2-5(2)	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH444(4)	HP-A2-5(2)	CBMH450	CONDUIT	2.0	12.5988 0.0130
MAJ-CBMH450(1)	CBMH450	HP-A2-7(1)	CONDUIT	2.0	- 15.1717 0.0130

MAJ-CBMH450(2)	HP-A2-7(1)	CBMH438	CONDUIT	2.0	15.1717 0.0130
MAJ-CBMH450(3)	CBMH450	HP-A2-7(2)	CONDUIT	2.0	- 19.3525 0.0130
MAJ-CBMH450(4)	HP-A2-7(2)	CBMH414	CONDUIT	2.0	16.7293 0.0130
MAJ-CBMH454(1)	CBMH454	HP-A2-4(1)	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH454(2)	HP-A2-4(1)	CBMH456	CONDUIT	2.0	10.0504 0.0130
MAJ-CBMH454(3)	CBMH454	HP-A2-4(2)	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH454(4)	HP-A2-4(2)	CBMH444/ST2	CONDUIT	2.0	25.8199 0.0130
MAJ-CBMH456(1)	CBMH456	HP-A2-2(1)	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH456(2)	HP-A2-2(1)	CB458	CONDUIT	2.0	8.5309 0.0130
MAJ-CBMH456(3)	CBMH456	HP-A2-2(2)	CONDUIT	2.0	- 10.0504 0.0130
MAJ-CBMH456(4)	HP-A2-2(2)	CBMH444/ST2	CONDUIT	2.0	23.0921 0.0130
MAJ-CBMH470(1)	CBMH470	HP-A1-1	CONDUIT	2.0	- 7.5212 0.0130
MAJ-CBMH470(2)	HP-A1-1	CBMH444/ST2	CONDUIT	2.0	28.6028 0.0130
MAJ-MD1	CB458	HP-MD1	CONDUIT	2.0	- 7.5212 0.0130
MAJ-MD2	CBMH254	MAJ-MD2	CONDUIT	2.0	- 5.5083 0.0130
MAJ-MD3	CB202	MAJ-MD3	CONDUIT	2.0	- 14.1393 0.0130
MAJ-PD1(1)	PD1	HP-A1-2	CONDUIT	2.0	- 2.5008 0.0130
MAJ-PD1(2)	HP-A1-2	CBMH430	CONDUIT	2.0	43.6436 0.0130
MAJ-PD2(1)	PD2	HP-A1-3	CONDUIT	2.0	- 2.5008 0.0130
MAJ-PD2(2)	HP-A1-3	CBMH430	CONDUIT	2.0	37.3632 0.0130
PD1-Out	PD1	MH466	CONDUIT	13.2	0.9849 0.0130
PD2-Out	PD2	MH466	CONDUIT	15.9	1.0063 0.0130
STM-10_(STM)	15_(STM)	MIN_MD	CONDUIT	13.6	0.2209 0.0130
STM-101_(STM)	CB406	CBMH404	CONDUIT	27.9	0.5011 0.0130
STM-102_(STM)	CBMH404	CBMH402	CONDUIT	27.9	0.5011 0.0130
STM-103_(STM)	CBMH402	MH400	CONDUIT	32.4	0.4938 0.0130
STM-104_(STM)	MH400	MH298	CONDUIT	10.7	0.3749 0.0130
STM-106_(STM)_1	MH298	ST8	CONDUIT	2.0	0.0152 0.0130
STM-106_(STM)_2	ST8	MH296	CONDUIT	2.0	0.0152 0.0130
STM-108_(STM)	MH296	CBMH294	CONDUIT	6.2	0.4808 0.0130

STM-109_(STM)	CBMH294	MH288	CONDUIT	6.1	0.4918	0.0130
STM-11_(STM)	CBMH470	MH468	CONDUIT	19.9	0.3526	0.0130
STM-113_(STM)	CBMH292	MH290	CONDUIT	6.1	0.4918	0.0130
STM-115_(STM)_1	MH290	ST7	CONDUIT	2.0	0.0152	0.0130
STM-115_(STM)_2	ST7	MH288	CONDUIT	2.0	0.0152	0.0130
STM-116_(STM)	CBMH414	MH412	CONDUIT	3.4	0.5970	0.0130
STM-118_(STM)_1	MH412	ST6	CONDUIT	2.0	0.0152	0.0130
STM-118_(STM)_2	ST6	MH410	CONDUIT	2.0	0.0152	0.0130
STM-12_(STM)	MH468	MH462	CONDUIT	29.3	0.2392	0.0130
STM-120_(STM)	MH410	CBMH408	CONDUIT	8.8	0.4525	0.0130
STM-122_(STM)	CBMH438	MH436	CONDUIT	6.2	0.4808	0.0130
STM-124_(STM)_1	MH436	ST5	CONDUIT	2.0	0.0152	0.0130
STM-124_(STM)_2	ST5	MH434	CONDUIT	2.0	0.0152	0.0130
STM-125_(STM)	MH434	MH432/ST4	CONDUIT	4.6	0.4329	0.0130
STM-126_(STM)	MH432/ST4	CBMH430	CONDUIT	6.2	0.4808	0.0130
STM-127_(STM)	CBMH430	MH428	CONDUIT	6.2	0.4808	0.0130
STM-13_(1)_(STM)	MH426_	MH418	CONDUIT	20.2	0.1487	0.0130
STM-13_(STM)	MH462	MH426_	CONDUIT	19.4	0.1550	0.0130
STM-130_(STM)	CB458	CBMH456	CONDUIT	19.1	0.5222	0.0130
STM-131_(STM)	CBMH456	CBMH454	CONDUIT	9.8	0.5102	0.0130
STM-132_(STM)	CBMH454	CBMH444/ST2	CONDUIT	39.8	0.5032	0.0130
STM-133_(STM)	CBMH444/ST2	MH440/ST3	CONDUIT	10.2	0.4892	0.0130
STM-135_(STM)	MH446	CBMH444/ST2	CONDUIT	4.7	0.4301	0.0130
STM-138_(STM)	CB460	CBMH454	CONDUIT	18.4	0.4899	0.0130
STM-139_(STM)	CBMH450	MH448	CONDUIT	3.3	0.6098	0.0130
STM-14_(STM)	MH418	MH416	CONDUIT	9.9	0.1006	0.0130
STM-141_(STM)_1	MH448	ST1	CONDUIT	2.0	0.0152	0.0130
STM-141_(STM)_2	ST1	MH446	CONDUIT	2.0	0.0152	0.0130
STM-145_(STM)	CBMH246/ST18	MH244	CONDUIT	12.6	0.4781	0.0130
STM-15_(1)_(STM)	MH286	MH278	CONDUIT	18.8	0.1597	0.0130

STM-15_(STM)	MH416	MH286	CONDUIT	55.3	0.1447	0.0130
STM-16_(STM)	MH278	MH262	CONDUIT	36.4	0.1648	0.0130
STM-17_(STM)	MH262	MH226	CONDUIT	22.7	0.1320	0.0130
STM-18_(1)_(STM)	MH220	MH216	CONDUIT	21.5	0.0929	0.0130
STM-18_(STM)	MH226	MH220	CONDUIT	19.0	0.1055	0.0130
STM-19_(STM)	MH216	MH212	CONDUIT	15.7	0.0637	0.0130
STM-20_(STM)	MH212	MH204	CONDUIT	25.3	0.0790	0.0130
STM-21_(STM)_1	MH204	MH200_Dummy	CONDUIT	82.1	0.0913	0.0130
STM-21_(STM)_2	MH200_Dummy	14_(STM)	CONDUIT	5.2	0.2868	0.0130
STM-22_(STM)	MH466	MH464	CONDUIT	30.9	0.3556	0.0130
STM-23_(STM)	MH464	MH462	CONDUIT	27.4	0.2555	0.0130
STM-24_(1)_(STM)	MH420	MH418	CONDUIT	33.7	0.3563	0.0130
STM-24_(STM)	CB424	MH420	CONDUIT	24.0	0.4998	0.0130
STM-26_(STM)	MH282	MH280	CONDUIT	22.3	0.4939	0.0130
STM-27_(STM)	MH280	MH278	CONDUIT	33.3	0.2400	0.0130
STM-44_(STM)	MH422	MH420	CONDUIT	15.7	0.3829	0.0130
STM-55_(STM)	MH284	MH280	CONDUIT	12.5	1.4378	0.0130
STM-58_(STM)	MH218	MH216	CONDUIT	36.6	1.0107	0.0130
STM-59_(STM)	CB210	CBMH208	CONDUIT	16.6	0.3019	0.0130
STM-60_(STM)	CBMH208	CBMH206	CONDUIT	42.0	0.1427	0.0130
STM-62_(STM)	CB202	MH200	CONDUIT	11.7	1.0283	0.0130
STM-63_(STM)	MH200	MH200_Dummy	CONDUIT	5.2	0.9561	0.0130
STM-64_(STM)	CB238	CBMH236	CONDUIT	15.9	0.5019	0.0130
STM-65_(STM)_1	CBMH236	MH234/ST16	CONDUIT	38.6	0.4927	0.0130
STM-65_(STM)_2	MH234/ST16	CBMH230	CONDUIT	7.7	0.5188	0.0130
STM-66_(STM)	CBMH230	CBMH228	CONDUIT	19.0	0.2637	0.0130
STM-70_(STM)_1	CB250	R-1_Dummy	CONDUIT	22.0	0.4955	0.0130
STM-70_(STM)_2	R-1_Dummy	MH238	CONDUIT	32.5	0.4951	0.0130
STM-71_(STM)	MH238	MH242	CONDUIT	40.3	0.2481	0.0130
STM-72_(STM)	MH242	MH240	CONDUIT	36.9	0.2440	0.0130

STM-73_(STM)	MH240	MH226	CONDUIT	6.9	0.2899	0.0130
STM-79_(STM)	MH224/ST14	CBMH222	CONDUIT	3.3	0.6098	0.0130
STM-82_(STM)	MH232/ST15	CBMH230	CONDUIT	4.8	0.4175	0.0130
STM-87_(STM)	CB260	CBMH258	CONDUIT	36.4	0.4940	0.0130
STM-88_(STM)_1	CBMH258	ST9	CONDUIT	2.0	0.0152	0.0130
STM-88_(STM)_2	ST9	CBMH254	CONDUIT	2.0	0.0152	0.0130
STM-89_(STM)_1	CBMH254	ST10	CONDUIT	2.0	0.0152	0.0130
STM-89_(STM)_2	ST10	CBMH252	CONDUIT	2.0	0.0152	0.0130
STM-9_(STM)	14_(STM)	15_(STM)	CONDUIT	4.1	0.7371	0.0130
STM-91_(STM)	CB256	CBMH254	CONDUIT	9.3	0.9647	0.0130
STM-92_(STM)	MH270/ST13	MH264	CONDUIT	12.6	0.4751	0.0130
STM-94_(STM)	CBMH268	MH266	CONDUIT	7.0	0.5714	0.0130
STM-96_(STM)_1	MH266	ST12	CONDUIT	2.0	0.0152	0.0130
STM-96_(STM)_2	ST12	MH264	CONDUIT	2.0	0.0152	0.0130
STM-97_(STM)	CBMH276	MH274	CONDUIT	6.6	0.4552	0.0130
STM-99_(STM)_1	MH274	ST11	CONDUIT	2.0	0.0152	0.0130
STM-99_(STM)_2	ST11	MH272	CONDUIT	2.0	0.0152	0.0130
R1_OvF	R1_S	HP-A1-5	WEIR			
R10_OvF	R10_S	CBMH214/ST17	WEIR			
R2_OvF	R2_S	HP-A2-19.1	WEIR			
R3_OvF	R3_S	CBMH408	WEIR			
R4_OvF	R4_S	HP-A2-7(2)	WEIR			
R5_OvF	R5_S	CBMH444/ST2	WEIR			
R6_OvF	R6_S	CBMH444/ST2	WEIR			
R7_OvF	R7_S	HP-A2-6	WEIR			
R8_OvF	R8_S	CBMH294	WEIR			
R9_OvF	R9_S	CBMH268	WEIR			
O-CBMH206	CBMH206	MH204	OUTLET			
O-CBMH214	CBMH214/ST17	MH212	OUTLET			
O-CBMH222	CBMH222	MH220	OUTLET			
O-CBMH228	CBMH228	MH226	OUTLET			
O-CBMH252	CBMH252	MH238	OUTLET			
O-CBMH408	CBMH408	MH286	OUTLET			
O-MH244	MH244	MH242	OUTLET			
O-MH264	MH264	MH262	OUTLET			
O-MH272	MH272	MH262	OUTLET			
O-MH288	MH288	MH286	OUTLET			
O-MH428	MH428	MH426_	OUTLET			
O-MH440	MH440/ST3	MH426_	OUTLET			
R10-Out	R10_S	MH218	OUTLET			
R1-Out	R1_S	R-1_Dummy	OUTLET			
R2-Out	R2_S	MH238	OUTLET			

R3-Out	R3_S	MH278	OUTLET
R4-Out	R4_S	MH416	OUTLET
R5-Out	R5_S	MH468	OUTLET
R6-Out	R6_S	MH462	OUTLET
R7-Out	R7_S	MH422	OUTLET
R8-Out	R8_S	MH284	OUTLET
R9-Out	R9_S	MH282	OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
MAJ-CB210(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	40250.57
MAJ-CB210(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	40250.57
MAJ-CB238(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	23220.06
MAJ-CB238(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	30723.59
MAJ-CB250(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	123087.46
MAJ-CB250(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	69215.12
MAJ-CB260(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB260(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB406(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	46510.07
MAJ-CB406(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	28442.21
MAJ-CB406(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1	45024.40
MAJ-CB406(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1	74174.06
MAJ-CB406(5)	RECT_OPEN	1.00	3.00	0.60	3.00	1	78892.68
MAJ-CB424(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	32847.99
MAJ-CB424(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	78892.68
MAJ-CB458(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	71231.45
MAJ-CB458(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	52047.05
MAJ-CB460(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1	32847.99
MAJ-CB460(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1	41900.70
MAJ-CB460(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1	36733.45
MAJ-CB460(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1	47951.44

MAJ-CBMH206(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH206(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH208	RECT_OPEN	1.00	3.00	0.60	3.00	1
40250.57						
MAJ-CBMH208(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
23220.06						
MAJ-CBMH214(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH214(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH222(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH222(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
74174.06						
MAJ-CBMH222(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH222(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH228(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH228(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH230(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH230(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH236(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
40250.57						
MAJ-CBMH236(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
71231.45						
MAJ-CBMH246(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH246(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH252(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
61733.10						
MAJ-CBMH252(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
77030.48						
MAJ-CBMH254(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH254(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH258(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH258(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH268(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH268(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH276(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH276(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH292(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH292(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						

MAJ-CBMH292(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH292(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH402(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH402(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH404(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
30723.59						
MAJ-CBMH404(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
47951.44						
MAJ-CBMH414(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH414(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
69215.12						
MAJ-CBMH430(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH430(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH438(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
60599.46						
MAJ-CBMH438(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
54616.39						
MAJ-CBMH444(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH444(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH444(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH444(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
58273.32						
MAJ-CBMH450(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH450(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
63947.17						
MAJ-CBMH450(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
72222.70						
MAJ-CBMH450(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
67149.65						
MAJ-CBMH454(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH454(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH454(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH454(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
83422.28						
MAJ-CBMH456(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH456(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
47951.44						
MAJ-CBMH456(3)	RECT_OPEN	1.00	3.00	0.60	3.00	1
52047.05						
MAJ-CBMH456(4)	RECT_OPEN	1.00	3.00	0.60	3.00	1
78892.68						
MAJ-CBMH470(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-CBMH470(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
87802.97						

MAJ-MD1	RECT_OPEN	1.00	3.00	0.60	3.00	1
45024.40						
MAJ-MD2	RECT_OPEN	1.00	3.00	0.60	3.00	1
38531.43						
MAJ-MD3	RECT_OPEN	1.00	3.00	0.60	3.00	1
61733.10						
MAJ-PD1(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
25962.28						
MAJ-PD1(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
108458.87						
MAJ-PD2(1)	RECT_OPEN	1.00	3.00	0.60	3.00	1
25962.28						
MAJ-PD2(2)	RECT_OPEN	1.00	3.00	0.60	3.00	1
100352.25						
PD1-Out	CIRCULAR	0.20	0.03	0.05	0.20	1
32.55						
PD2-Out	CIRCULAR	0.20	0.03	0.05	0.20	1
32.90						
STM-10_(STM)	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
1415.82						
STM-101_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.46						
STM-102_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.46						
STM-103_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.96						
STM-104_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
59.21						
STM-106_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-106_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-108_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-109_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.82						
STM-11_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.43						
STM-113_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.82						
STM-115_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-115_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-116_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
74.72						
STM-118_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-118_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-12_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
139.46						
STM-120_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
65.05						
STM-122_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-124_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-124_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

STM-125_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
63.63						
STM-126_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-127_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.05						
STM-13_(1)_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
236.82						
STM-13_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
241.72						
STM-130_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
69.88						
STM-131_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
69.08						
STM-132_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.60						
STM-133_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.64						
STM-135_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
63.42						
STM-138_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.69						
STM-139_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
75.52						
STM-14_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
194.76						
STM-141_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-141_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-145_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
66.87						
STM-15_(1)_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
245.42						
STM-15_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
233.55						
STM-16_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
249.27						
STM-17_(STM)	CIRCULAR	0.60	0.28	0.15	0.60	1
223.13						
STM-18_(1)_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
339.41						
STM-18_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
361.60						
STM-19_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
280.98						
STM-20_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
312.84						
STM-21_(STM)_1	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
910.23						
STM-21_(STM)_2	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
1613.22						
STM-22_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.67						
STM-23_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
144.11						
STM-24_(1)_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
57.72						
STM-24_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.37						

STM-26_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.97						
STM-27_(STM)	CIRCULAR	0.38	0.11	0.09	0.38	1
85.89						
STM-44_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
59.84						
STM-55_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
115.96						
STM-58_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
97.22						
STM-59_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
156.67						
STM-60_(STM)	CIRCULAR	0.75	0.44	0.19	0.75	1
420.55						
STM-62_(STM)	CIRCULAR	0.25	0.05	0.06	0.25	1
60.31						
STM-63_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
94.56						
STM-64_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
68.51						
STM-65_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
67.88						
STM-65_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
69.66						
STM-66_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
146.42						
STM-70_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
68.07						
STM-70_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
68.05						
STM-71_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
142.01						
STM-72_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
140.85						
STM-73_(STM)	CIRCULAR	0.45	0.16	0.11	0.45	1
153.51						
STM-79_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
75.52						
STM-82_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
62.49						
STM-87_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
67.97						
STM-88_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-88_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-89_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-89_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-9_(STM)	HORIZ_ELLIPSE	0.86	0.95	0.26	1.35	1
2586.23						
STM-91_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
94.98						
STM-92_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
66.65						
STM-94_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
73.10						
STM-96_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

STM-96_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-97_(STM)	CIRCULAR	0.30	0.07	0.07	0.30	1
65.25						
STM-99_(STM)_1	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						
STM-99_(STM)_2	CIRCULAR	0.30	0.07	0.07	0.30	1
11.94						

****
Analysis Options
****
Flow Units ..... LPS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... YES
  Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 11/17/2025 00:00:00
Ending Date 11/25/2025 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:01:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 2.00 sec
Variable Time Step ..... YES
Maximum Trials 8
Number of Threads 16
Head Tolerance ..... 0.001500 m

**********	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
**********	---------	-------
Initial LID Storage	0.005	0.961
Total Precipitation	0.194	36.858
Evaporation Loss	0.000	0.000
Infiltration Loss	0.030	5.632
Surface Runoff	0.165	31.375
Final Storage	0.005	0.980
Continuity Error (%)	-0.444	

**********	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
**********	---------	---------
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.165	1.654
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000

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  External Inflow .........          0.000         0.000
  External Outflow .........         0.166         1.656
  Flooding Loss ............         0.000         0.000
  Evaporation Loss .........         0.000         0.000
  Exfiltration Loss ........         0.000         0.000
  Initial Stored Volume ....         0.022         0.223
  Final Stored Volume ......         0.022         0.223
  Continuity Error (%) .....        -0.106

  ***************************
  Time-Step Critical Elements
  ***************************
  Link STM-118_(STM)_2 (6.40%)
  Link STM-115_(STM)_2 (5.09%)
  Link STM-106_(STM)_2 (4.44%)
  Link STM-89_(STM)_2 (3.64%)
  Link STM-99_(STM)_2 (2.53%)

  *******************************
  Highest Flow Instability Indexes
  *******************************
  Link STM-9_(STM) (4)
  Link STM-21_(STM)_2 (3)
  Link STM-10_(STM) (3)

  *********************************
  Most Frequent Nonconverging Nodes
  *********************************
  Convergence obtained at all time steps.

  ************************
  Routing Time Step Summary
  ************************
  Minimum Time Step           :     0.50 sec
  Average Time Step           :     1.84 sec
  Maximum Time Step           :     2.00 sec
  % of Time in Steady State   :     0.00
  Average Iterations per Step :     2.00
  % of Steps Not Converging   :     0.00
  Time Step Frequencies       :
      2.000 -  1.516 sec      :    82.99 %
      1.516 -  1.149 sec      :     9.86 %
      1.149 -  0.871 sec      :     5.39 %
      0.871 -  0.660 sec      :     0.95 %
      0.660 -  0.500 sec      :     0.81 %

  ***************************
  Subcatchment Runoff Summary
  ***************************

  ---------------------------------------------------------------------------------------
-----------------------------------------
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Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Total Runoff 10^6 ltr	Peak Runoff LPS	Runoff Coeff
A0-1	36.86	0.00	0.00	27.64	8.48	1.34	9.82	0.01	4.98	0.266
A0-2	36.86	0.00	0.00	21.56	15.14	0.24	15.38	0.06	32.92	0.417
A0-3	36.86	0.00	0.00	36.49	0.00	0.47	0.47	0.00	1.91	0.013
A1-1	36.86	0.00	0.00	17.84	18.82	0.33	19.15	0.01	6.00	0.519
A1-2	36.86	0.00	0.00	0.00	36.96	0.00	36.96	0.00	2.56	1.003
A1-3	36.86	0.00	0.00	0.00	36.94	0.00	36.94	0.00	2.56	1.002
A1-4	36.86	0.00	0.00	0.00	36.97	0.00	36.97	0.01	3.84	1.003
A1-5	36.86	0.00	0.00	0.00	37.04	0.00	37.04	0.02	9.81	1.005
A1-6	36.86	0.00	0.00	36.33	0.00	0.77	0.77	0.00	0.42	0.021
A2-1	36.86	0.00	0.00	1.07	35.92	0.07	35.99	0.02	10.88	0.976
A2-10	36.86	0.00	0.00	9.78	26.95	0.27	27.22	0.01	4.87	0.738
A2-11	36.86	0.00	0.00	0.00	37.00	0.00	37.00	0.01	3.63	1.004
A2-12	36.86	0.00	0.00	8.33	28.46	0.23	28.69	0.01	4.75	0.778
A2-13	36.86	0.00	0.00	4.70	32.22	0.14	32.36	0.05	29.09	0.878
A2-14	36.86	0.00	0.00	1.43	35.56	0.08	35.64	0.06	36.06	0.967
A2-15	36.86	0.00	0.00	1.43	35.55	0.08	35.64	0.06	37.33	0.967
A2-16	36.86	0.00	0.00	2.52	34.46	0.10	34.56	0.07	39.02	0.938
A2-17	36.86	0.00	0.00	2.52	34.44	0.10	34.54	0.08	46.49	0.937
A2-18	36.86	0.00	0.00	0.00	36.93	0.00	36.93	0.01	6.19	1.002
A2-19.1	36.86	0.00	0.00	0.00	37.03	0.00	37.03	0.03	16.00	1.005
A2-19.2	36.86	0.00	0.00	0.00	37.03	0.00	37.03	0.01	6.40	1.005
A2-19.3	36.86	0.00	0.00	0.00	36.94	0.00	36.94	0.01	5.76	1.002
A2-19.4	36.86	0.00	0.00	0.00	36.99	0.00	36.99	0.02	8.96	1.004
A2-2	36.86	0.00	0.00	10.49	26.21	0.29	26.51	0.01	5.86	0.719
A2-20	36.86	0.00	0.00	2.16	34.82	0.10	34.92	0.05	31.94	0.947
A2-21	36.86	0.00	0.00	7.54	29.14	0.35	29.49	0.01	3.22	0.800

A2-22			36.86	0.00	0.00	2.50	34.33
0.17	34.50	0.01	3.88	0.936			
A2-23			36.86	0.00	0.00	1.43	35.55
0.08	35.63	0.04	22.82	0.967			
A2-24			36.86	0.00	0.00	7.64	29.28
0.14	29.41	0.05	26.19	0.798			
A2-25			36.86	0.00	0.00	1.43	35.55
0.08	35.64	0.04	23.02	0.967			
A2-26			36.86	0.00	0.00	1.08	35.99
0.05	36.04	0.11	65.23	0.978			
A2-27			36.86	0.00	0.00	7.20	29.53
0.28	29.81	0.01	3.21	0.809			
A2-28			36.86	0.00	0.00	5.75	31.01
0.25	31.26	0.01	4.47	0.848			
A2-29			36.86	0.00	0.00	7.55	29.15
0.32	29.47	0.02	11.36	0.800			
A2-3			36.86	0.00	0.00	13.51	22.34
0.17	22.50	0.02	14.02	0.611			
A2-4			36.86	0.00	0.00	1.07	35.83
0.09	35.92	0.01	6.09	0.975			
A2-5			36.86	0.00	0.00	2.17	34.87
0.07	34.95	0.09	54.60	0.948			
A2-6			36.86	0.00	0.00	1.07	35.96
0.06	36.02	0.08	48.20	0.977			
A2-7			36.86	0.00	0.00	4.70	32.22
0.14	32.36	0.04	22.88	0.878			
A2-8			36.86	0.00	0.00	5.07	31.86
0.13	32.00	0.04	20.88	0.868			
A2-9			36.86	0.00	0.00	4.70	32.21
0.15	32.36	0.05	28.75	0.878			
R-1			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.10	59.31	1.002			
R-10			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.02	9.60	1.002			
R-2			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.06	33.92	1.002			
R-3			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.07	40.11	1.002			
R-4			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.04	25.39	1.002			
R-5			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.02	8.96	1.002			
R-6			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.05	26.88	1.002			
R-7			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.04	20.48	1.002			
R-8			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.02	10.24	1.002			
R-9			36.86	0.00	0.00	0.00	36.93
0.00	36.93	0.02	13.44	1.002			

****
Node Depth Summary
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	Average Depth	Maximum Depth	Maximum HGL	Time of Max Occurrence	Reported Max Depth

Node	Type	Meters	Meters	Meters	days	hr:min	Meters
HP-A1-1	JUNCTION	0.00	0.00	96.60	0	00:00	0.00
HP-A1-2	JUNCTION	0.00	0.00	96.85	0	00:00	0.00
HP-A1-3	JUNCTION	0.00	0.00	96.75	0	00:00	0.00
HP-A1-4	JUNCTION	0.00	0.00	96.45	0	00:00	0.00
HP-A1-5	JUNCTION	0.00	0.00	96.50	0	00:00	0.00
HP-A2-1	JUNCTION	0.00	0.00	96.65	0	00:00	0.00
HP-A2-10(1)	JUNCTION	0.00	0.00	96.41	0	00:00	0.00
HP-A2-10(2)	JUNCTION	0.00	0.00	96.40	0	00:00	0.00
HP-A2-11	JUNCTION	0.00	0.00	96.42	0	00:00	0.00
HP-A2-12	JUNCTION	0.00	0.00	96.40	0	00:00	0.00
HP-A2-13(1)	JUNCTION	0.00	0.00	96.30	0	00:00	0.00
HP-A2-13(2)	JUNCTION	0.00	0.00	96.35	0	00:00	0.00
HP-A2-16	JUNCTION	0.00	0.00	96.15	0	00:00	0.00
HP-A2-17	JUNCTION	0.00	0.00	96.20	0	00:00	0.00
HP-A2-18	JUNCTION	0.00	0.00	96.65	0	00:00	0.00
HP-A2-19.1	JUNCTION	0.00	0.00	96.43	0	00:00	0.00
HP-A2-19.3	JUNCTION	0.00	0.00	96.50	0	00:00	0.00
HP-A2-19.4	JUNCTION	0.00	0.00	96.65	0	00:00	0.00
HP-A2-2(1)	JUNCTION	0.00	0.00	96.45	0	00:00	0.00
HP-A2-2(2)	JUNCTION	0.00	0.00	96.50	0	00:00	0.00
HP-A2-20	JUNCTION	0.00	0.00	96.50	0	00:00	0.00
HP-A2-21	JUNCTION	0.00	0.00	96.32	0	00:00	0.00
HP-A2-22	JUNCTION	0.00	0.00	96.37	0	00:00	0.00
HP-A2-23	JUNCTION	0.00	0.00	96.30	0	00:00	0.00
HP-A2-24	JUNCTION	0.00	0.00	96.20	0	00:00	0.00
HP-A2-25	JUNCTION	0.00	0.00	96.35	0	00:00	0.00
HP-A2-25(2)	JUNCTION	0.00	0.00	96.22	0	00:00	0.00
HP-A2-26	JUNCTION	0.00	0.00	96.25	0	00:00	0.00
HP-A2-27	JUNCTION	0.00	0.00	96.40	0	00:00	0.00
HP-A2-28	JUNCTION	0.00	0.00	96.32	0	00:00	0.00
HP-A2-29	JUNCTION	0.00	0.00	96.45	0	00:00	0.00
HP-A2-3(1)	JUNCTION	0.00	0.00	96.43	0	00:00	0.00
HP-A2-3(2)	JUNCTION	0.00	0.00	96.45	0	00:00	0.00
HP-A2-4(1)	JUNCTION	0.00	0.00	96.50	0	00:00	0.00
HP-A2-4(2)	JUNCTION	0.00	0.00	96.55	0	00:00	0.00
HP-A2-5(1)	JUNCTION	0.00	0.00	96.35	0	00:00	0.00
HP-A2-5(2)	JUNCTION	0.00	0.00	96.25	0	00:00	0.00
HP-A2-6	JUNCTION	0.00	0.00	96.30	0	00:00	0.00
HP-A2-7(1)	JUNCTION	0.00	0.00	96.30	0	00:00	0.00
HP-A2-7(2)	JUNCTION	0.00	0.00	96.38	0	00:00	0.00
HP-A2-8	JUNCTION	0.00	0.00	96.27	0	00:00	0.00
HP-A2-9	JUNCTION	0.00	0.00	96.35	0	00:00	0.00
HP-MD1	OUTFALL	0.00	0.00	96.43	0	00:00	0.00
MAJ-MD	OUTFALL	0.00	0.00	96.43	0	00:00	0.00
MAJ-MD2	OUTFALL	0.00	0.00	96.41	0	00:00	0.00
MAJ-MD3	OUTFALL	0.00	0.00	96.63	0	00:00	0.00
MIN_MD	OUTFALL	0.23	0.23	93.23	0	00:00	0.23
OF-Strandherd	OUTFALL	0.00	0.00	95.49	0	00:00	0.00
OF-Systemhouse	OUTFALL	0.00	0.00	95.88	0	00:00	0.00
14_(STM)	STORAGE	0.14	0.16	93.25	0	05:06	0.16
15_(STM)	STORAGE	0.20	0.22	93.25	0	05:06	0.22
CB202	STORAGE	0.00	0.01	93.98	0	02:10	0.01
CB210	STORAGE	0.01	0.30	94.70	0	03:02	0.30
CB238	STORAGE	0.00	0.05	94.73	0	04:58	0.05
CB250	STORAGE	0.00	0.08	94.43	0	02:10	0.08

CB256	STORAGE	0.00	0.06	95.02	0	02:10	0.06
CB260	STORAGE	0.00	0.06	94.96	0	02:10	0.06
CB406	STORAGE	0.00	0.05	94.96	0	02:10	0.05
CB424	STORAGE	0.00	0.05	94.42	0	02:10	0.05
CB458	STORAGE	0.00	0.09	94.99	0	02:10	0.09
CB460	STORAGE	0.01	0.19	94.92	0	06:03	0.19
CBMH206	STORAGE	0.03	0.72	94.70	0	02:59	0.72
CBMH208	STORAGE	0.02	0.51	94.70	0	03:01	0.51
CBMH214/ST17	STORAGE	0.11	0.84	94.68	0	05:26	0.84
CBMH222	STORAGE	0.16	1.03	94.77	0	03:06	1.03
CBMH228	STORAGE	0.10	0.79	94.73	0	05:00	0.79
CBMH230	STORAGE	0.07	0.59	94.73	0	04:59	0.59
CBMH236	STORAGE	0.02	0.29	94.73	0	04:59	0.29
CBMH246/ST18	STORAGE	0.18	0.66	94.76	0	03:42	0.66
CBMH252	STORAGE	0.04	0.61	94.72	0	03:34	0.61
CBMH254	STORAGE	0.03	0.45	94.72	0	03:34	0.45
CBMH258	STORAGE	0.03	0.45	94.72	0	03:34	0.45
CBMH268	STORAGE	0.00	0.24	94.98	0	02:10	0.24
CBMH276	STORAGE	0.01	0.22	94.47	0	02:10	0.22
CBMH292	STORAGE	0.17	0.53	94.63	0	06:11	0.53
CBMH294	STORAGE	0.06	0.40	94.63	0	06:11	0.40
CBMH402	STORAGE	0.00	0.09	94.65	0	02:10	0.09
CBMH404	STORAGE	0.00	0.08	94.84	0	02:10	0.08
CBMH408	STORAGE	0.10	0.55	94.60	0	06:09	0.55
CBMH414	STORAGE	0.01	0.18	94.60	0	02:10	0.18
CBMH430	STORAGE	0.08	0.53	94.92	0	05:58	0.53
CBMH438	STORAGE	0.02	0.24	94.92	0	05:58	0.24
CBMH444/ST2	STORAGE	0.14	0.57	94.92	0	06:04	0.57
CBMH450	STORAGE	0.02	0.25	94.92	0	06:05	0.25
CBMH454	STORAGE	0.02	0.29	94.92	0	06:04	0.29
CBMH456	STORAGE	0.01	0.18	94.92	0	06:04	0.18
CBMH470	STORAGE	0.00	0.07	94.41	0	02:10	0.07
MH200	STORAGE	0.00	0.01	93.71	0	02:11	0.01
MH200_Dummy	STORAGE	0.10	0.15	93.28	0	02:16	0.15
MH204	STORAGE	0.03	0.20	93.41	0	02:15	0.20
MH212	STORAGE	0.03	0.26	93.60	0	02:14	0.26
MH216	STORAGE	0.03	0.26	93.62	0	02:14	0.26
MH218	STORAGE	0.00	0.04	94.22	0	02:15	0.04
MH220	STORAGE	0.03	0.25	93.64	0	02:14	0.25
MH224/ST14	STORAGE	0.16	0.87	94.77	0	03:06	0.87
MH226	STORAGE	0.02	0.24	93.66	0	02:14	0.24
MH232/ST15	STORAGE	0.17	0.63	94.73	0	04:57	0.63
MH234/ST16	STORAGE	0.19	0.63	94.73	0	04:55	0.63
MH238	STORAGE	0.01	0.14	94.07	0	02:11	0.14
MH240	STORAGE	0.01	0.16	93.88	0	02:12	0.16
MH242	STORAGE	0.01	0.14	93.96	0	02:12	0.14
MH244	STORAGE	0.06	0.72	94.76	0	03:43	0.72
MH262	STORAGE	0.02	0.18	93.77	0	02:14	0.18
MH264	STORAGE	0.08	0.83	94.78	0	04:21	0.83
MH266	STORAGE	0.06	0.68	94.78	0	04:21	0.68
MH270/ST13	STORAGE	0.26	0.83	94.78	0	04:22	0.83
MH272	STORAGE	0.14	0.63	94.47	0	04:24	0.63
MH274	STORAGE	0.04	0.40	94.47	0	04:24	0.40
MH278	STORAGE	0.02	0.18	93.84	0	02:13	0.18
MH280	STORAGE	0.00	0.09	94.14	0	02:17	0.09
MH282	STORAGE	0.00	0.06	94.29	0	02:15	0.06
MH284	STORAGE	0.00	0.04	94.27	0	02:14	0.04

MH286	STORAGE	0.02	0.16	93.86	0	02:13	0.16
MH288	STORAGE	0.12	0.57	94.63	0	06:11	0.57
MH290	STORAGE	0.20	0.56	94.63	0	06:11	0.56
MH296	STORAGE	0.05	0.36	94.63	0	06:11	0.36
MH298	STORAGE	0.05	0.36	94.63	0	06:11	0.36
MH400	STORAGE	0.03	0.26	94.63	0	06:12	0.26
MH410	STORAGE	0.05	0.36	94.60	0	06:10	0.36
MH412	STORAGE	0.05	0.36	94.60	0	06:10	0.36
MH416	STORAGE	0.01	0.16	93.95	0	02:12	0.15
MH418	STORAGE	0.02	0.15	93.96	0	02:12	0.15
MH420	STORAGE	0.00	0.08	94.32	0	02:10	0.08
MH422	STORAGE	0.00	0.07	94.43	0	02:22	0.07
MH426_	STORAGE	0.01	0.13	93.98	0	02:11	0.13
MH428	STORAGE	0.12	0.71	94.92	0	05:58	0.71
MH432/ST4	STORAGE	0.20	0.62	94.92	0	05:58	0.62
MH434	STORAGE	0.05	0.42	94.92	0	05:59	0.42
MH436	STORAGE	0.05	0.42	94.92	0	05:58	0.42
MH440/ST3	STORAGE	0.11	0.70	94.92	0	06:04	0.70
MH446	STORAGE	0.05	0.42	94.92	0	06:04	0.42
MH448	STORAGE	0.05	0.42	94.92	0	06:05	0.42
MH462	STORAGE	0.00	0.11	94.00	0	02:11	0.11
MH464	STORAGE	0.00	0.06	94.18	0	02:10	0.06
MH466	STORAGE	0.00	0.06	94.44	0	02:10	0.06
MH468	STORAGE	0.00	0.08	94.20	0	02:10	0.08
PD1	STORAGE	0.00	0.04	94.64	0	02:10	0.04
PD2	STORAGE	0.00	0.04	94.69	0	02:10	0.04
R-1_Dummy	STORAGE	0.00	0.12	94.37	0	02:10	0.12
R1_S	STORAGE	0.00	0.10	98.10	0	02:23	0.10
R10_S	STORAGE	0.00	0.09	98.09	0	02:14	0.09
R2_S	STORAGE	0.00	0.10	98.10	0	02:23	0.10
R3_S	STORAGE	0.00	0.10	98.10	0	02:23	0.10
R4_S	STORAGE	0.00	0.10	98.10	0	02:23	0.10
R5_S	STORAGE	0.00	0.09	98.09	0	02:21	0.09
R6_S	STORAGE	0.00	0.09	98.09	0	02:22	0.09
R7_S	STORAGE	0.00	0.08	98.08	0	02:22	0.08
R8_S	STORAGE	0.00	0.09	98.09	0	02:14	0.09
R9_S	STORAGE	0.00	0.09	98.09	0	02:14	0.09
ST1	STORAGE	0.20	0.57	94.92	0	06:05	0.57
ST10	STORAGE	0.18	0.60	94.72	0	03:34	0.60
ST11	STORAGE	0.16	0.52	94.47	0	04:24	0.52
ST12	STORAGE	0.21	0.83	94.78	0	04:21	0.83
ST5	STORAGE	0.20	0.57	94.92	0	05:59	0.57
ST6	STORAGE	0.20	0.51	94.60	0	06:10	0.51
ST7	STORAGE	0.22	0.58	94.63	0	06:12	0.58
ST8	STORAGE	0.20	0.51	94.63	0	06:11	0.51
ST9	STORAGE	0.18	0.60	94.72	0	03:34	0.60

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Node Inflow Summary
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		Maximum Lateral	Maximum Total	Time of Max	Lateral Inflow	Total Inflow	Flow Balance

Node	Type	Inflow LPS	Inflow LPS	Occurrence days	Occurrence hr:min	Volume 10^6 ltr	Volume 10^6 ltr	Error Percent
HP-A1-1	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A1-2	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A1-3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A1-4	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A1-5	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-1	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-10(1)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-10(2)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-11	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-12	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-13(1)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-13(2)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-16	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-17	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-18	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-19.1	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-19.3	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-19.4	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-2(1)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-2(2)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-20	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-21	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-22	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-23	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-24	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-25	JUNCTION	0.00	0.00	0	00:00	0	0	0.000
HP-A2-25(2)	JUNCTION	0.00	0.00	0	00:00	0	0	0.000

HP-A2-26	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-27	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-28	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-29	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-3(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-3(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-4(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-4(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-5(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-5(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-6	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-7(1)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-7(2)	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-8	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-A2-9	JUNCTION	0.00	0.00	0	00:00	0	0
0.000 ltr							
HP-MD1	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MAJ-MD	OUTFALL	1.91	1.91	0	02:10	0.00104	0.00104
0.000							
MAJ-MD2	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MAJ-MD3	OUTFALL	0.00	0.00	0	00:00	0	0
0.000 ltr							
MIN_MD	OUTFALL	0.00	89.35	0	02:16	0	1.59
0.000							
OF-Strandherd	OUTFALL	32.92	32.92	0	02:10	0.0552	0.0552
0.000							
OF-Systemhouse	OUTFALL	4.98	4.98	0	02:10	0.0055	0.0055
0.000							
14_(STM)	STORAGE	0.00	89.28	0	02:16	0	2.18
0.158							
15_(STM)	STORAGE	0.00	89.29	0	02:16	0	2.17
-0.091							
CB202	STORAGE	0.42	0.42	0	02:10	0.0002	0.0002
-0.013							
CB210	STORAGE	3.21	3.21	0	02:10	0.00536	0.00721
0.537							
CB238	STORAGE	3.22	3.22	0	02:10	0.00531	0.00531
0.142							
CB250	STORAGE	9.81	9.81	0	02:10	0.017	0.017
-0.044							
CB256	STORAGE	6.40	6.40	0	02:10	0.0111	0.0111
-0.004							
CB260	STORAGE	6.19	6.19	0	02:10	0.0107	0.0107
-0.008							

CB406	STORAGE	4.87	4.87	0	02:10	0.00816	0.00816	0.145
CB424	STORAGE	3.84	3.84	0	02:10	0.00665	0.00665	-0.083
CB458	STORAGE	10.88	10.88	0	02:10	0.0187	0.0187	0.098
CB460	STORAGE	14.02	14.02	0	02:10	0.023	0.023	-0.102
CBMH206	STORAGE	11.36	11.36	0	02:10	0.0189	0.0383	-0.013
CBMH208	STORAGE	4.47	10.40	0	02:09	0.0075	0.0212	-0.058
CBMH214/ST17	STORAGE	65.23	65.23	0	02:10	0.113	0.113	-0.000
CBMH222	STORAGE	23.02	23.02	0	02:10	0.0396	0.0629	0.002
CBMH228	STORAGE	26.19	26.19	0	02:10	0.045	0.122	-0.006
CBMH230	STORAGE	22.82	46.65	0	02:10	0.0392	0.135	0.018
CBMH236	STORAGE	3.88	7.07	0	02:10	0.00655	0.0119	-0.367
CBMH246/ST18	STORAGE	31.94	31.94	0	02:10	0.0548	0.0654	0.007
CBMH252	STORAGE	16.00	16.00	0	02:10	0.0278	0.088	0.001
CBMH254	STORAGE	5.76	12.15	0	02:10	0.00997	0.0523	0.000
CBMH258	STORAGE	8.96	15.15	0	02:10	0.0155	0.0262	-0.010
CBMH268	STORAGE	46.49	46.49	0	02:10	0.0798	0.0798	0.023
CBMH276	STORAGE	39.02	39.02	0	02:10	0.067	0.067	0.160
CBMH292	STORAGE	29.09	29.09	0	02:10	0.0498	0.0499	-0.001
CBMH294	STORAGE	37.33	37.33	0	02:10	0.0641	0.115	-0.007
CBMH402	STORAGE	4.75	13.18	0	02:10	0.00803	0.0225	0.740
CBMH404	STORAGE	3.63	8.48	0	02:10	0.00629	0.0144	-0.153
CBMH408	STORAGE	36.06	36.06	0	02:10	0.062	0.155	-0.002
CBMH414	STORAGE	28.75	28.75	0	02:10	0.0492	0.0492	0.054
CBMH430	STORAGE	48.20	48.20	0	02:10	0.0832	0.18	0.011
CBMH438	STORAGE	20.88	20.88	0	02:10	0.0358	0.0358	0.185
CBMH444/ST2	STORAGE	54.60	91.27	0	02:10	0.0947	0.229	0.108
CBMH450	STORAGE	22.88	22.88	0	02:10	0.0391	0.0391	0.068
CBMH454	STORAGE	6.09	36.77	0	02:10	0.0104	0.0619	-0.092
CBMH456	STORAGE	5.86	16.72	0	02:10	0.00981	0.0285	0.097
CBMH470	STORAGE	6.00	6.00	0	02:10	0.00996	0.00996	-0.006

MH200	STORAGE	0.00	0.38	0	02:10	0	0.0002 -0.008
MH200_Dummy	STORAGE	0.00	89.44	0	02:15	0	1.59 -0.186
MH204	STORAGE	0.00	89.30	0	02:15	0	1.59 0.002
MH212	STORAGE	0.00	88.30	0	02:14	0	1.56 0.004
MH216	STORAGE	0.00	87.35	0	02:14	0	1.45 0.012
MH218	STORAGE	0.00	3.46	0	02:14	0	0.0166 0.001
MH220	STORAGE	0.00	84.02	0	02:14	0	1.43 0.004
MH224/ST14	STORAGE	0.00	21.05	0	02:10	0	0.0272 0.004
MH226	STORAGE	0.00	82.92	0	02:13	0	1.39 -0.000
MH232/ST15	STORAGE	0.00	34.13	0	02:09	0	0.0513 -0.016
MH234/ST16	STORAGE	0.00	22.16	0	02:05	0	0.0343 0.104
MH238	STORAGE	0.00	28.18	0	02:11	0	0.254 0.041
MH240	STORAGE	0.00	29.13	0	02:12	0	0.308 -0.016
MH242	STORAGE	0.00	29.22	0	02:11	0	0.308 0.012
MH244	STORAGE	0.00	2.53	0	02:06	0	0.0548 -0.007
MH262	STORAGE	0.00	53.32	0	02:14	0	0.987 -0.014
MH264	STORAGE	0.00	14.05	0	02:05	0	0.0935 0.034
MH266	STORAGE	0.00	46.44	0	02:10	0	0.0798 -0.025
MH270/ST13	STORAGE	0.00	11.89	0	02:05	0	0.018 -0.163
MH272	STORAGE	0.00	1.24	0	02:10	0	0.0671 -0.001
MH274	STORAGE	0.00	38.97	0	02:10	0	0.0669 -0.068
MH278	STORAGE	0.00	51.39	0	02:13	0	0.84 0.005
MH280	STORAGE	0.00	8.42	0	02:15	0	0.041 0.002
MH282	STORAGE	0.00	4.81	0	02:14	0	0.0233 0.003
MH284	STORAGE	0.00	3.62	0	02:14	0	0.0177 -0.006
MH286	STORAGE	0.00	35.77	0	02:12	0	0.73 -0.053
MH288	STORAGE	0.00	24.49	0	02:05	0	0.158 0.001
MH290	STORAGE	0.00	28.78	0	02:10	0	0.05 -0.006
MH296	STORAGE	0.00	35.21	0	02:11	0	0.0757 0.042
MH298	STORAGE	0.00	13.12	0	02:10	0	0.0224 -0.294

MH400	STORAGE	0.00	13.14	0	02:10	0	0.0223
-0.269							
MH410	STORAGE	0.00	34.91	0	02:10	0	0.136
0.024							
MH412	STORAGE	0.00	28.72	0	02:10	0	0.0492
0.014							
MH416	STORAGE	0.00	34.07	0	02:12	0	0.482
-0.004							
MH418	STORAGE	0.00	29.19	0	02:11	0	0.438
-0.001							
MH420	STORAGE	0.00	8.19	0	02:10	0	0.0421
0.010							
MH422	STORAGE	0.00	5.04	0	02:22	0	0.0355
0.002							
MH426_	STORAGE	0.00	21.29	0	02:11	0	0.396
-0.060							
MH428	STORAGE	0.00	1.59	0	02:00	0	0.119
-0.002							
MH432/ST4	STORAGE	0.00	46.53	0	02:10	0	0.136
-0.013							
MH434	STORAGE	0.00	34.91	0	02:10	0	0.0975
0.034							
MH436	STORAGE	0.00	20.84	0	02:10	0	0.0358
-0.076							
MH440/ST3	STORAGE	0.00	52.81	0	02:06	0	0.196
-0.113							
MH446	STORAGE	0.00	33.99	0	02:12	0	0.0951
0.006							
MH448	STORAGE	0.00	22.85	0	02:10	0	0.0391
0.012							
MH462	STORAGE	0.00	18.70	0	02:10	0	0.0809
-0.004							
MH464	STORAGE	0.00	5.12	0	02:10	0	0.00887
-0.007							
MH466	STORAGE	0.00	5.12	0	02:10	0	0.00887
-0.005							
MH468	STORAGE	0.00	8.04	0	02:10	0	0.0255
-0.000							
PD1	STORAGE	2.56	2.56	0	02:10	0.00443	0.00443
-0.002							
PD2	STORAGE	2.56	2.56	0	02:10	0.00443	0.00443
-0.003							
R-1_Dummy	STORAGE	0.00	20.78	0	02:10	0	0.12
0.007							
R1_S	STORAGE	59.31	59.31	0	02:10	0.103	0.103
-0.001							
R10_S	STORAGE	9.60	9.60	0	02:10	0.0166	0.0166
-0.001							
R2_S	STORAGE	33.92	33.92	0	02:10	0.0587	0.0587
-0.000							
R3_S	STORAGE	40.11	40.11	0	02:10	0.0694	0.0694
-0.000							
R4_S	STORAGE	25.39	25.39	0	02:10	0.0439	0.0439
-0.000							
R5_S	STORAGE	8.96	8.96	0	02:10	0.0155	0.0155
-0.001							
R6_S	STORAGE	26.88	26.88	0	02:10	0.0465	0.0465
-0.001							
R7_S	STORAGE	20.48	20.48	0	02:10	0.0355	0.0355
-0.001							

R8_S	STORAGE	10.24	10.24	0	02:10	0.0177	
0.0177	-0.001						
R9_S	STORAGE	13.44	13.44	0	02:10	0.0233	
0.0233	-0.001						
ST1	STORAGE	0.00	50.86	0	02:11	0	
0.0894	-0.030						
ST10	STORAGE	0.00	20.23	0	02:09	0	
0.0685	-0.012						
ST11	STORAGE	0.00	38.61	0	02:10	0	
0.0821	-0.051						
ST12	STORAGE	0.00	45.82	0	02:10	0	
0.0896	-0.028						
ST5	STORAGE	0.00	54.60	0	02:10	0	
0.0889	-0.062						
ST6	STORAGE	0.00	62.75	0	02:10	0	
0.13	-0.047						
ST7	STORAGE	0.00	50.41	0	02:05	0	
0.093	-0.021						
ST8	STORAGE	0.00	47.45	0	02:11	0	
0.0675	-0.077						
ST9	STORAGE	0.00	20.16	0	02:10	0	
0.0395	-0.068						

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
MH224/ST14	STORAGE	6.08	0.439	1.431
MH232/ST15	STORAGE	11.31	0.210	1.270
MH270/ST13	STORAGE	10.72	0.316	1.394
MH288	STORAGE	15.08	0.133	1.457
MH296	STORAGE	8.65	0.063	1.447
MH298	STORAGE	1.05	0.003	1.487
MH410	STORAGE	7.77	0.058	1.542
MH428	STORAGE	19.34	0.258	1.272
MH432/ST4	STORAGE	11.72	0.138	1.232
MH434	STORAGE	10.50	0.118	1.262
MH440/ST3	STORAGE	17.73	0.247	1.303
MH446	STORAGE	10.05	0.117	1.243
ST1	STORAGE	10.05	0.117	1.183
ST10	STORAGE	5.91	0.148	1.582
ST11	STORAGE	7.09	0.096	1.684
ST12	STORAGE	12.31	0.376	1.374
ST5	STORAGE	10.50	0.118	1.232
ST6	STORAGE	7.77	0.058	1.502
ST7	STORAGE	15.08	0.133	1.467
ST8	STORAGE	8.65	0.063	1.467

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Node Flooding Summary

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No nodes were flooded.

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Storage Volume Summary
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Storage Unit	Average Volume 1000 m³	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m³	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow LPS
14_(STM)	0.001	5.9	0.0	0.0	0.001	7.0	0 05:06	89.29
15_(STM)	0.001	8.5	0.0	0.0	0.002	9.3	0 05:06	89.35
CB202	0.000	0.0	0.0	0.0	0.000	0.4	0 02:10	0.38
CB210	0.000	0.3	0.0	0.0	0.000	10.5	0 03:02	3.17
CB238	0.000	0.1	0.0	0.0	0.000	1.9	0 04:58	3.20
CB250	0.000	0.0	0.0	0.0	0.000	3.5	0 02:10	9.80
CB256	0.000	0.0	0.0	0.0	0.000	0.3	0 02:10	6.39
CB260	0.000	0.1	0.0	0.0	0.000	2.4	0 02:10	6.19
CB406	0.000	0.1	0.0	0.0	0.000	2.3	0 02:10	4.86
CB424	0.000	0.0	0.0	0.0	0.000	1.6	0 02:10	3.84
CB458	0.000	0.1	0.0	0.0	0.000	3.6	0 02:10	10.86
CB460	0.000	0.4	0.0	0.0	0.000	7.2	0 06:03	14.00
CBMH206	0.000	0.1	0.0	0.0	0.001	2.7	0 02:59	6.61
CBMH208	0.000	0.6	0.0	0.0	0.001	17.0	0 03:01	3.21
CBMH214/ST17	0.012	4.1	0.0	0.0	0.093	31.7	0 05:26	1.27
CBMH222	0.000	0.6	0.0	0.0	0.001	4.1	0 03:06	22.13
CBMH228	0.000	0.0	0.0	0.0	0.001	0.1	0 05:00	24.89
CBMH230	0.000	0.4	0.0	0.0	0.001	3.7	0 04:59	44.82
CBMH236	0.000	0.6	0.0	0.0	0.000	10.3	0 04:59	7.05
CBMH246/ST18	0.013	9.1	0.0	0.0	0.047	33.5	0 03:42	2.53

CBMH252		0.000	0.1	0.0	0.0	0.001	1.7	0
03:34	15.51							
CBMH254		0.000	0.6	0.0	0.0	0.001	10.4	0
03:34	11.59							
CBMH258		0.000	0.8	0.0	0.0	0.001	14.1	0
03:34	14.66							
CBMH268		0.000	0.0	0.0	0.0	0.000	0.5	0
02:10	46.44							
CBMH276		0.000	0.0	0.0	0.0	0.000	0.8	0
02:10	38.97							
CBMH292		0.000	0.4	0.0	0.0	0.001	1.1	0
06:11	28.78							
CBMH294		0.000	0.1	0.0	0.0	0.000	0.5	0
06:11	36.76							
CBMH402		0.000	0.1	0.0	0.0	0.000	3.3	0
02:10	13.14							
CBMH404		0.000	0.1	0.0	0.0	0.000	2.9	0
02:10	8.44							
CBMH408		0.000	0.2	0.0	0.0	0.001	0.9	0
06:09	35.76							
CBMH414		0.000	0.0	0.0	0.0	0.000	0.6	0
02:10	28.72							
CBMH430		0.000	0.3	0.0	0.0	0.001	2.0	0
05:58	47.85							
CBMH438		0.000	0.0	0.0	0.0	0.000	0.5	0
05:58	20.84							
CBMH444/ST2		0.010	7.4	0.0	0.0	0.043	31.1	0
06:04	66.13							
CBMH450		0.000	0.0	0.0	0.0	0.000	0.1	0
06:05	22.85							
CBMH454		0.000	0.9	0.0	0.0	0.000	10.8	0
06:04	36.69							
CBMH456		0.000	0.4	0.0	0.0	0.000	6.9	0
06:04	16.69							
CBMH470		0.000	0.0	0.0	0.0	0.000	2.3	0
02:10	5.96							
MH200		0.000	0.0	0.0	0.0	0.000	0.5	0
02:11	0.37							
MH200_Dummy		0.000	0.0	0.0	0.0	0.000	0.0	0
00:00	89.28							
MH204		0.000	1.0	0.0	0.0	0.000	6.4	0
02:15	89.26							
MH212		0.000	1.1	0.0	0.0	0.000	9.5	0
02:14	88.20							
MH216		0.000	0.9	0.0	0.0	0.000	8.6	0
02:14	87.26							
MH218		0.000	0.1	0.0	0.0	0.000	1.8	0
02:15	3.46							
MH220		0.000	1.0	0.0	0.0	0.000	9.6	0
02:14	83.91							
MH224/ST14		0.005	9.2	0.0	0.0	0.027	51.4	0
03:06	1.05							
MH226		0.000	0.9	0.0	0.0	0.000	8.6	0
02:14	82.84							
MH232/ST15		0.014	11.1	0.0	0.0	0.051	41.3	0
04:57	0.67							
MH234/ST16		0.009	11.4	0.0	0.0	0.029	38.8	0
04:55	0.48							
MH238		0.000	0.3	0.0	0.0	0.000	5.5	0
02:11	28.19							

MH240		0.000	0.3	0.0	0.0	0.000	6.2	0
02:12	29.01							
MH242		0.000	0.3	0.0	0.0	0.000	4.7	0
02:12	29.13							
MH244		0.000	2.0	0.0	0.0	0.001	26.4	0
03:43	1.18							
MH262		0.000	0.9	0.0	0.0	0.000	6.7	0
02:14	53.31							
MH264		0.000	3.7	0.0	0.0	0.001	36.2	0
04:21	12.74							
MH266		0.000	3.0	0.0	0.0	0.001	34.6	0
04:21	45.82							
MH270/ST13		0.005	14.8	0.0	0.0	0.017	48.2	0
04:22	0.29							
MH272		0.000	5.7	0.0	0.0	0.001	25.4	0
04:24	1.04							
MH274		0.000	1.9	0.0	0.0	0.000	20.0	0
04:24	38.61							
MH278		0.000	0.8	0.0	0.0	0.000	6.9	0
02:13	51.35							
MH280		0.000	0.1	0.0	0.0	0.000	4.0	0
02:17	8.39							
MH282		0.000	0.1	0.0	0.0	0.000	3.0	0
02:15	4.80							
MH284		0.000	0.0	0.0	0.0	0.000	1.8	0
02:14	3.62							
MH286		0.000	0.8	0.0	0.0	0.000	6.6	0
02:13	35.68							
MH288		0.000	5.8	0.0	0.0	0.001	28.2	0
06:11	23.85							
MH290		0.000	9.9	0.0	0.0	0.001	27.1	0
06:11	28.43							
MH296		0.000	3.0	0.0	0.0	0.000	20.0	0
06:11	34.56							
MH298		0.000	2.9	0.0	0.0	0.000	19.6	0
06:11	13.63							
MH400		0.000	1.5	0.0	0.0	0.000	14.0	0
06:12	13.12							
MH410		0.000	2.6	0.0	0.0	0.000	18.8	0
06:10	34.54							
MH412		0.000	2.7	0.0	0.0	0.000	19.4	0
06:10	28.41							
MH416		0.000	0.5	0.0	0.0	0.000	5.6	0
02:12	34.03							
MH418		0.000	0.6	0.0	0.0	0.000	6.0	0
02:12	29.08							
MH420		0.000	0.1	0.0	0.0	0.000	4.1	0
02:10	8.06							
MH422		0.000	0.1	0.0	0.0	0.000	3.4	0
02:22	5.03							
MH426_		0.000	0.6	0.0	0.0	0.000	5.0	0
02:11	21.18							
MH428		0.000	6.0	0.0	0.0	0.001	35.8	0
05:58	1.17							
MH432/ST4		0.012	13.1	0.0	0.0	0.038	41.2	0
05:58	34.91							
MH434		0.000	3.0	0.0	0.0	0.000	24.9	0
05:59	34.26							
MH436		0.000	3.2	0.0	0.0	0.000	26.0	0
05:58	20.36							

MH440/ST3	0.009	7.0	0.0	0.0	0.055	43.3	0
06:04 1.88							
MH446	0.000	2.9	0.0	0.0	0.000	25.1	0
06:04 33.40							
MH448	0.000	3.2	0.0	0.0	0.000	26.8	0
06:05 22.60							
MH462	0.000	0.1	0.0	0.0	0.000	4.3	0
02:11 18.67							
MH464	0.000	0.1	0.0	0.0	0.000	2.8	0
02:10 5.10							
MH466	0.000	0.1	0.0	0.0	0.000	2.5	0
02:10 5.12							
MH468	0.000	0.1	0.0	0.0	0.000	3.2	0
02:10 7.94							
PD1	0.000	0.0	0.0	0.0	0.000	0.0	0
00:00 2.56							
PD2	0.000	0.0	0.0	0.0	0.000	0.0	0
00:00 2.56							
R-1_Dummy	0.000	0.0	0.0	0.0	0.000	0.0	0
00:00 20.57							
R1_S	0.001	0.0	0.0	0.0	0.041	2.3	0
02:23 12.95							
R10_S	0.000	0.0	0.0	0.0	0.005	1.1	0
02:14 3.46							
R2_S	0.000	0.1	0.0	0.0	0.024	3.6	0
02:23 6.84							
R3_S	0.000	0.0	0.0	0.0	0.029	3.5	0
02:23 8.13							
R4_S	0.000	0.0	0.0	0.0	0.018	2.5	0
02:23 5.43							
R5_S	0.000	0.0	0.0	0.0	0.006	1.1	0
02:21 2.46							
R6_S	0.000	0.0	0.0	0.0	0.017	2.4	0
02:22 6.42							
R7_S	0.000	0.0	0.0	0.0	0.013	2.1	0
02:22 5.04							
R8_S	0.000	0.0	0.0	0.0	0.005	1.1	0
02:14 3.62							
R9_S	0.000	0.0	0.0	0.0	0.007	1.1	0
02:14 4.81							
ST1	0.030	17.5	0.0	0.0	0.085	49.8	0
06:05 1.57							
ST10	0.010	15.5	0.0	0.0	0.033	52.6	0
03:34 1.61							
ST11	0.020	13.7	0.0	0.0	0.064	45.3	0
04:24 1.24							
ST12	0.014	18.4	0.0	0.0	0.054	72.5	0
04:21 14.05							
ST5	0.030	17.7	0.0	0.0	0.085	49.9	0
05:59 0.79							
ST6	0.050	17.6	0.0	0.0	0.127	44.6	0
06:10 1.00							
ST7	0.034	19.7	0.0	0.0	0.087	51.2	0
06:12 7.34							
ST8	0.025	17.9	0.0	0.0	0.064	45.0	0
06:11 0.49							
ST9	0.010	15.5	0.0	0.0	0.033	52.6	0
03:34 0.81							

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
HP-MD1	0.00	0.00	0.00	0.000
MAJ-MD	0.55	0.84	1.91	0.001
MAJ-MD2	0.00	0.00	0.00	0.000
MAJ-MD3	0.00	0.00	0.00	0.000
MIN_MD	39.38	8.43	89.35	1.594
OF-Strandherd	3.99	4.29	32.92	0.055
OF-Systemhouse	3.81	0.47	4.98	0.005
System	6.82	14.02	105.63	1.656

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Link Flow Summary
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Link	Type	Maximum |Flow| LPS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
MAJ-CB210(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB210(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB238(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB238(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB250(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB250(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB260(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB260(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(3)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(4)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB406(5)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB424(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB424(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB458(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB458(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB460(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB460(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB460(3)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CB460(4)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH206(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH206(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH208	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH208(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH214(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH214(2)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
MAJ-CBMH222(1)	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

MAJ-CBMH222(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH222(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH222(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH228(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH228(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH230(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH230(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH236(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH236(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH246(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH246(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH252(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH252(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH254(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH254(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH258(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH258(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH268(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH268(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH276(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH276(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH292(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH402(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH402(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH404(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH404(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH414(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH414(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH430(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH430(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH438(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH438(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH444(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH450(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH450(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH450(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH450(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH454(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(3)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH456(4)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH470(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-CBMH470(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-MD1	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-MD2	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-MD3	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD1(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00

MAJ-PD1(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD2(1)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
MAJ-PD2(2)	CONDUIT	0.00	0	00:00	0.00	0.00	0.00
PD1-Out	CONDUIT	2.56	0	02:10	0.61	0.08	0.19
PD2-Out	CONDUIT	2.56	0	02:10	0.62	0.08	0.19
STM-10_(STM)	CONDUIT	89.35	0	02:16	0.54	0.06	0.26
STM-101_(STM)	CONDUIT	4.86	0	02:10	0.50	0.07	0.20
STM-102_(STM)	CONDUIT	8.44	0	02:10	0.64	0.12	0.24
STM-103_(STM)	CONDUIT	13.14	0	02:10	0.76	0.19	0.51
STM-104_(STM)	CONDUIT	13.12	0	02:10	0.64	0.22	0.94
STM-106_(STM)_1	CONDUIT	13.63	0	02:11	0.71	1.14	1.00
STM-106_(STM)_2	CONDUIT	34.56	0	02:11	0.98	2.90	1.00
STM-108_(STM)	CONDUIT	35.21	0	02:11	0.75	0.53	1.00
STM-109_(STM)	CONDUIT	24.49	0	02:05	0.64	0.36	1.00
STM-11_(STM)	CONDUIT	5.96	0	02:10	0.54	0.10	0.21
STM-113_(STM)	CONDUIT	28.78	0	02:10	0.41	0.42	1.00
STM-115_(STM)_1	CONDUIT	28.43	0	02:10	0.63	2.38	1.00
STM-115_(STM)_2	CONDUIT	23.13	0	02:05	0.56	1.94	1.00
STM-116_(STM)	CONDUIT	28.72	0	02:10	0.78	0.38	0.63
STM-118_(STM)_1	CONDUIT	28.41	0	02:10	0.92	2.38	1.00
STM-118_(STM)_2	CONDUIT	34.54	0	02:07	0.99	2.89	1.00
STM-12_(STM)	CONDUIT	7.94	0	02:10	0.51	0.06	0.15
STM-120_(STM)	CONDUIT	34.91	0	02:10	0.71	0.54	1.00
STM-122_(STM)	CONDUIT	20.84	0	02:10	0.72	0.31	0.84
STM-124_(STM)_1	CONDUIT	20.36	0	02:10	0.83	1.71	1.00
STM-124_(STM)_2	CONDUIT	34.26	0	02:10	0.96	2.87	1.00
STM-125_(STM)	CONDUIT	34.91	0	02:10	0.69	0.55	1.00
STM-126_(STM)	CONDUIT	46.53	0	02:10	0.69	0.69	1.00
STM-127_(STM)	CONDUIT	1.59	0	02:00	0.35	0.02	1.00
STM-13_(1)_(STM)	CONDUIT	21.18	0	02:11	0.46	0.09	0.22
STM-13_(STM)	CONDUIT	18.67	0	02:11	0.49	0.08	0.19
STM-130_(STM)	CONDUIT	10.86	0	02:10	0.69	0.16	0.27
STM-131_(STM)	CONDUIT	16.69	0	02:10	0.75	0.24	0.67
STM-132_(STM)	CONDUIT	36.69	0	02:10	0.87	0.53	0.98
STM-133_(STM)	CONDUIT	52.81	0	02:06	1.13	0.78	1.00
STM-135_(STM)	CONDUIT	33.99	0	02:12	0.63	0.54	1.00
STM-138_(STM)	CONDUIT	14.00	0	02:10	0.55	0.21	0.77
STM-139_(STM)	CONDUIT	22.85	0	02:10	0.74	0.30	0.86
STM-14_(STM)	CONDUIT	29.08	0	02:11	0.54	0.15	0.24
STM-141_(STM)_1	CONDUIT	22.60	0	02:08	0.86	1.89	1.00
STM-141_(STM)_2	CONDUIT	33.40	0	02:12	0.79	2.80	1.00
STM-145_(STM)	CONDUIT	2.53	0	02:06	0.33	0.04	1.00
STM-15_(1)_(STM)	CONDUIT	35.68	0	02:13	0.56	0.15	0.28
STM-15_(STM)	CONDUIT	34.03	0	02:12	0.60	0.15	0.26
STM-16_(STM)	CONDUIT	51.35	0	02:14	0.74	0.21	0.29
STM-17_(STM)	CONDUIT	53.31	0	02:14	0.86	0.24	0.27
STM-18_(1)_(STM)	CONDUIT	83.91	0	02:14	0.66	0.25	0.33
STM-18_(STM)	CONDUIT	82.84	0	02:14	0.68	0.23	0.32
STM-19_(STM)	CONDUIT	87.26	0	02:14	0.66	0.31	0.34
STM-20_(STM)	CONDUIT	88.20	0	02:15	0.82	0.28	0.29
STM-21_(STM)_1	CONDUIT	89.26	0	02:15	0.72	0.10	0.20
STM-21_(STM)_2	CONDUIT	89.28	0	02:16	0.94	0.06	0.17
STM-22_(STM)	CONDUIT	5.12	0	02:10	0.53	0.09	0.19
STM-23_(STM)	CONDUIT	5.10	0	02:10	0.45	0.04	0.12
STM-24_(1)_(STM)	CONDUIT	8.06	0	02:11	0.59	0.14	0.25
STM-24_(STM)	CONDUIT	3.84	0	02:10	0.42	0.06	0.20
STM-26_(STM)	CONDUIT	4.80	0	02:15	0.55	0.07	0.18

STM-27_(STM)	CONDUIT	8.39	0	02:17	0.52	0.10	0.20
STM-44_(STM)	CONDUIT	5.03	0	02:22	0.51	0.08	0.20
STM-55_(STM)	CONDUIT	3.62	0	02:14	0.34	0.03	0.21
STM-58_(STM)	CONDUIT	3.46	0	02:15	0.64	0.04	0.13
STM-59_(STM)	CONDUIT	3.17	0	02:05	0.38	0.02	0.73
STM-60_(STM)	CONDUIT	5.59	0	02:09	0.16	0.01	0.72
STM-62_(STM)	CONDUIT	0.38	0	02:10	0.34	0.01	0.06
STM-63_(STM)	CONDUIT	0.37	0	02:11	0.31	0.00	0.05
STM-64_(STM)	CONDUIT	3.20	0	02:10	0.50	0.05	0.30
STM-65_(STM)_1	CONDUIT	7.05	0	02:10	0.29	0.10	0.98
STM-65_(STM)_2	CONDUIT	15.94	0	02:05	0.36	0.23	1.00
STM-66_(STM)	CONDUIT	23.83	0	02:10	0.24	0.16	1.00
STM-70_(STM)_1	CONDUIT	9.80	0	02:10	0.51	0.14	0.33
STM-70_(STM)_2	CONDUIT	20.57	0	02:10	0.81	0.30	0.39
STM-71_(STM)	CONDUIT	28.19	0	02:11	0.72	0.20	0.30
STM-72_(STM)	CONDUIT	29.13	0	02:12	0.66	0.21	0.32
STM-73_(STM)	CONDUIT	29.01	0	02:12	0.70	0.19	0.31
STM-79_(STM)	CONDUIT	21.05	0	02:10	0.33	0.28	1.00
STM-82_(STM)	CONDUIT	34.13	0	02:09	0.62	0.55	1.00
STM-87_(STM)	CONDUIT	6.19	0	02:10	0.61	0.09	0.20
STM-88_(STM)_1	CONDUIT	14.66	0	02:10	0.40	1.23	1.00
STM-88_(STM)_2	CONDUIT	5.78	0	02:05	0.17	0.48	1.00
STM-89_(STM)_1	CONDUIT	6.16	0	02:09	0.31	0.52	1.00
STM-89_(STM)_2	CONDUIT	14.13	0	02:05	0.41	1.18	1.00
STM-9_(STM)	CONDUIT	89.29	0	02:16	0.80	0.03	0.19
STM-91_(STM)	CONDUIT	6.39	0	02:10	0.71	0.07	0.19
STM-92_(STM)	CONDUIT	11.89	0	02:05	0.23	0.18	1.00
STM-94_(STM)	CONDUIT	46.44	0	02:10	0.92	0.64	0.67
STM-96_(STM)_1	CONDUIT	45.82	0	02:10	0.75	3.84	1.00
STM-96_(STM)_2	CONDUIT	14.05	0	02:05	0.29	1.18	1.00
STM-97_(STM)	CONDUIT	38.97	0	02:10	0.85	0.60	0.77
STM-99_(STM)_1	CONDUIT	38.61	0	02:10	1.02	3.23	1.00
STM-99_(STM)_2	CONDUIT	1.24	0	02:10	0.29	0.10	1.00
R1_OvF	WEIR	0.00	0	00:00			0.00
R10_OvF	WEIR	0.00	0	00:00			0.00
R2_OvF	WEIR	0.00	0	00:00			0.00
R3_OvF	WEIR	0.00	0	00:00			0.00
R4_OvF	WEIR	0.00	0	00:00			0.00
R5_OvF	WEIR	0.00	0	00:00			0.00
R6_OvF	WEIR	0.00	0	00:00			0.00
R7_OvF	WEIR	0.00	0	00:00			0.00
R8_OvF	WEIR	0.00	0	00:00			0.00
R9_OvF	WEIR	0.00	0	00:00			0.00
O-CBMH206	DUMMY	1.18	0	02:59			
O-CBMH214	DUMMY	1.27	0	05:26			
O-CBMH222	DUMMY	1.33	0	03:06			
O-CBMH228	DUMMY	1.23	0	05:00			
O-CBMH252	DUMMY	1.75	0	03:34			
O-CBMH408	DUMMY	1.04	0	06:09			
O-MH244	DUMMY	1.18	0	03:43			
O-MH264	DUMMY	1.26	0	04:21			
O-MH272	DUMMY	1.04	0	04:24			
O-MH288	DUMMY	1.06	0	06:11			
O-MH428	DUMMY	1.17	0	05:58			
O-MH440	DUMMY	1.88	0	06:04			
R10-Out	DUMMY	3.46	0	02:14			
R1-Out	DUMMY	12.95	0	02:23			

R2-Out	DUMMY	6.84	0	02:23
R3-Out	DUMMY	8.13	0	02:23
R4-Out	DUMMY	5.43	0	02:23
R5-Out	DUMMY	2.46	0	02:21
R6-Out	DUMMY	6.42	0	02:22
R7-Out	DUMMY	5.04	0	02:22
R8-Out	DUMMY	3.62	0	02:14
R9-Out	DUMMY	4.81	0	02:14

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class							
	/Actual		Up	Down	Sub	Sup	Up	Down	Norm Inlet
Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd Ctrl
MAJ-CB210(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB210(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB238(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB238(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB250(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB250(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB260(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB260(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB406(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB406(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB406(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB406(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB406(5)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB424(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB424(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB458(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB458(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00
MAJ-CB460(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00

MAJ-CB460(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CB460(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH206(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH206(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH208	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH208(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH214(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH214(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH222(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH228(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH228(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH230(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH230(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH236(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH236(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH246(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH246(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH252(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH252(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH254(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH254(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH258(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH258(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH268(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH268(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH276(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									

MAJ-CBMH276(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH292(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH402(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH402(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH404(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH404(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH414(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH414(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH430(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH430(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH438(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH438(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH444(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH450(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH454(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH456(3)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									

MAJ-CBMH456(4)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH470(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-CBMH470(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD1	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-MD3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD1(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD1(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD2(1)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
MAJ-PD2(2)	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
PD1-Out	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
PD2-Out	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-10_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-101_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-102_(STM)	1.00	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.01
0.00									
STM-103_(STM)	1.00	0.00	0.05	0.00	0.08	0.00	0.00	0.87	0.94
0.00									
STM-104_(STM)	1.00	0.82	0.02	0.00	0.15	0.00	0.00	0.01	0.84
0.00									
STM-106_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-106_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-108_(STM)	1.00	0.00	0.00	0.00	0.23	0.00	0.00	0.77	0.02
0.00									
STM-109_(STM)	1.00	0.00	0.00	0.00	0.24	0.00	0.00	0.76	0.01
0.00									
STM-11_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-113_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-115_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-115_(STM)_2	1.00	0.00	0.00	0.00	0.24	0.00	0.00	0.76	0.00
0.00									
STM-116_(STM)	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.90
0.00									
STM-118_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-118_(STM)_2	1.00	0.00	0.00	0.00	0.99	0.00	0.01	0.00	0.00
0.00									
STM-12_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-120_(STM)	1.00	0.00	0.00	0.00	0.19	0.00	0.00	0.81	0.00
0.00									

STM-122_(STM)	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.90	0.00
STM-124_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.00
STM-124_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-125_(STM)	1.00	0.00	0.00	0.00	0.16	0.00	0.00	0.84	0.01	0.00
STM-126_(STM)	1.00	0.00	0.00	0.00	0.18	0.00	0.00	0.82	0.00	0.00
STM-127_(STM)	1.00	0.00	0.00	0.00	0.18	0.00	0.00	0.82	0.00	0.00
STM-13_(1)_(STM)	1.00	0.00	0.00	0.00	0.23	0.00	0.00	0.77	0.00	0.00
STM-13_(STM)	1.00	0.00	0.06	0.00	0.17	0.00	0.00	0.77	0.86	0.00
STM-130_(STM)	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.95	0.15	0.00
STM-131_(STM)	1.00	0.00	0.01	0.00	0.08	0.00	0.00	0.91	0.92	0.00
STM-132_(STM)	1.00	0.00	0.05	0.00	0.13	0.00	0.00	0.83	0.89	0.00
STM-133_(STM)	1.00	0.00	0.00	0.00	0.17	0.00	0.00	0.83	0.01	0.00
STM-135_(STM)	1.00	0.00	0.00	0.00	0.15	0.00	0.00	0.85	0.01	0.00
STM-138_(STM)	1.00	0.00	0.01	0.00	0.10	0.00	0.00	0.89	0.93	0.00
STM-139_(STM)	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.90	0.00
STM-14_(STM)	1.00	0.00	0.00	0.00	0.22	0.00	0.00	0.78	0.00	0.00
STM-141_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.00
STM-141_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
STM-145_(STM)	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.00	0.00
STM-15_(1)_(STM)	1.00	0.00	0.00	0.00	0.26	0.00	0.00	0.74	0.00	0.00
STM-15_(STM)	1.00	0.00	0.00	0.00	0.29	0.00	0.00	0.71	0.24	0.00
STM-16_(STM)	1.00	0.00	0.00	0.00	0.30	0.00	0.00	0.70	0.10	0.00
STM-17_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-18_(1)_(STM)	1.00	0.00	0.00	0.00	0.26	0.00	0.00	0.74	0.00	0.00
STM-18_(STM)	1.00	0.00	0.00	0.00	0.30	0.00	0.00	0.70	0.00	0.00
STM-19_(STM)	1.00	0.00	0.00	0.00	0.31	0.00	0.00	0.69	0.02	0.00
STM-20_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
STM-21_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.19	0.00
STM-21_(STM)_2	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00	0.00
STM-22_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00

STM-23_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-24_(1)_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-24_(STM)	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.97	0.03
0.00									
STM-26_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-27_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-44_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-55_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
0.00									
STM-58_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-59_(STM)	1.00	0.00	0.00	0.00	0.03	0.00	0.00	0.97	0.00
0.00									
STM-60_(STM)	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.95	0.00
0.00									
STM-62_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-63_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-64_(STM)	1.00	0.00	0.00	0.00	0.04	0.00	0.00	0.96	0.96
0.00									
STM-65_(STM)_1	1.00	0.00	0.03	0.00	0.09	0.00	0.00	0.87	0.92
0.00									
STM-65_(STM)_2	1.00	0.00	0.00	0.00	0.13	0.00	0.00	0.87	0.01
0.00									
STM-66_(STM)	1.00	0.00	0.00	0.00	0.14	0.00	0.00	0.86	0.00
0.00									
STM-70_(STM)_1	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	1.00
0.00									
STM-70_(STM)_2	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-71_(STM)	1.00	0.00	0.00	0.00	0.10	0.00	0.00	0.90	0.06
0.00									
STM-72_(STM)	1.00	0.00	0.00	0.00	0.08	0.00	0.00	0.92	0.01
0.00									
STM-73_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-79_(STM)	1.00	0.00	0.00	0.00	0.05	0.00	0.00	0.94	0.00
0.00									
STM-82_(STM)	1.00	0.00	0.00	0.00	0.13	0.00	0.00	0.87	0.00
0.00									
STM-87_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									
STM-88_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-88_(STM)_2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-89_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-89_(STM)_2	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.00
0.00									
STM-9_(STM)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-91_(STM)	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00									

STM-92_(STM)	1.00	0.00	0.00	0.00	0.12	0.00	0.00	0.88	0.01
0.00									
STM-94_(STM)	1.00	0.00	0.00	0.00	0.02	0.00	0.00	0.98	0.01
0.00									
STM-96_(STM)_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
STM-96_(STM)_2	1.00	0.00	0.00	0.00	0.12	0.00	0.00	0.88	0.00
0.00									
STM-97_(STM)	1.00	0.00	0.00	0.00	0.07	0.00	0.00	0.93	0.02
0.00									
STM-99_(STM)_1	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.01	0.00
0.00									
STM-99_(STM)_2	1.00	0.00	0.00	0.00	0.12	0.00	0.00	0.88	0.00
0.00									

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Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
STM-104_(STM)	0.01	0.01	1.04	0.01	0.01
STM-106_(STM)_1	8.64	8.64	8.64	0.08	0.01
STM-106_(STM)_2	8.64	8.64	8.64	0.15	0.01
STM-108_(STM)	8.64	8.64	11.41	0.01	0.01
STM-109_(STM)	12.33	12.33	15.08	0.01	0.01
STM-113_(STM)	25.11	25.11	28.42	0.01	0.01
STM-115_(STM)_1	15.08	15.08	15.08	0.22	0.01
STM-115_(STM)_2	15.08	15.08	15.08	0.11	0.01
STM-118_(STM)_1	7.77	7.77	7.77	0.22	0.01
STM-118_(STM)_2	7.77	7.77	7.77	0.23	0.01
STM-120_(STM)	7.77	7.77	11.07	0.01	0.01
STM-124_(STM)_1	10.50	10.50	10.50	0.18	0.01
STM-124_(STM)_2	10.50	10.50	10.50	0.18	0.01
STM-125_(STM)	10.50	10.50	11.72	0.01	0.01
STM-126_(STM)	14.82	14.82	16.72	0.01	0.01
STM-127_(STM)	17.37	17.37	19.33	0.01	0.01
STM-132_(STM)	0.01	0.01	14.17	0.01	0.01
STM-133_(STM)	14.75	14.75	17.73	0.01	0.01
STM-135_(STM)	10.05	10.05	11.22	0.01	0.01
STM-141_(STM)_1	10.05	10.05	10.05	0.19	0.01
STM-141_(STM)_2	10.05	10.05	10.05	0.18	0.01
STM-145_(STM)	7.22	7.22	8.54	0.01	0.01
STM-65_(STM)_1	0.01	0.01	10.15	0.01	0.01
STM-65_(STM)_2	10.54	10.54	12.12	0.01	0.01
STM-66_(STM)	8.61	8.61	10.54	0.01	0.01
STM-79_(STM)	6.08	6.08	6.29	0.01	0.01
STM-82_(STM)	11.31	11.31	12.12	0.01	0.01
STM-88_(STM)_1	5.90	5.90	5.90	0.13	0.01
STM-88_(STM)_2	5.90	5.90	5.90	0.01	0.01
STM-89_(STM)_1	5.90	5.90	5.90	0.01	0.01
STM-89_(STM)_2	5.90	5.90	5.90	0.12	0.01
STM-92_(STM)	10.72	10.72	12.31	0.01	0.01
STM-96_(STM)_1	12.31	12.31	12.31	0.36	0.23

STM-96_(STM)_2	12.31	12.31	12.31	0.11	0.05
STM-99_(STM)_1	7.08	7.08	7.08	0.32	0.02
STM-99_(STM)_2	7.08	7.08	7.08	0.01	0.01

Analysis begun on: Fri Jan 23 13:23:46 2026
Analysis ended on: Fri Jan 23 13:24:17 2026
Total elapsed time: 00:00:31

Appendix E
DRAWINGS