TRAILS WEST: COPE DRIVE UNITS
Servicing and Stormwater Management Report

June 21, 2023

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Kris Kilborn

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Stantec Consulting Ltd. is commissioned by 1230374 Ontario Inc. to prepare a Servicing and Stormwater Management Report for the Trails West – Cope Drive Units development. The subject properties include multiple blocks located north and south of Cope Drive from Northgraves Crescent to Akerson Road / Carronbridge Circle. From the original subdivision development process, the blocks are within the Soho West Phase 1 and Phase 2 development areas. The current reference to the area is now the Trails West neighbourhood. The properties are indicated in **Figure 1** below.

The proposed 1.62 ha-development consists of three residential blocks containing 44 townhomes and 48 back-to-back units located in the ward of Kanata South in the City of Ottawa. The subject properties are zoned General Mixed-Use, Exception 2353 and 2354, Maximum Building Height 14 metres (GM [2353/2354] H (14)) and Residential Third Density, Subzone X, Exception 2355 (R3X [2355]) in the City's Comprehensive Zoning By-law (2008-250). The proposed development is permitted under the current zoning.

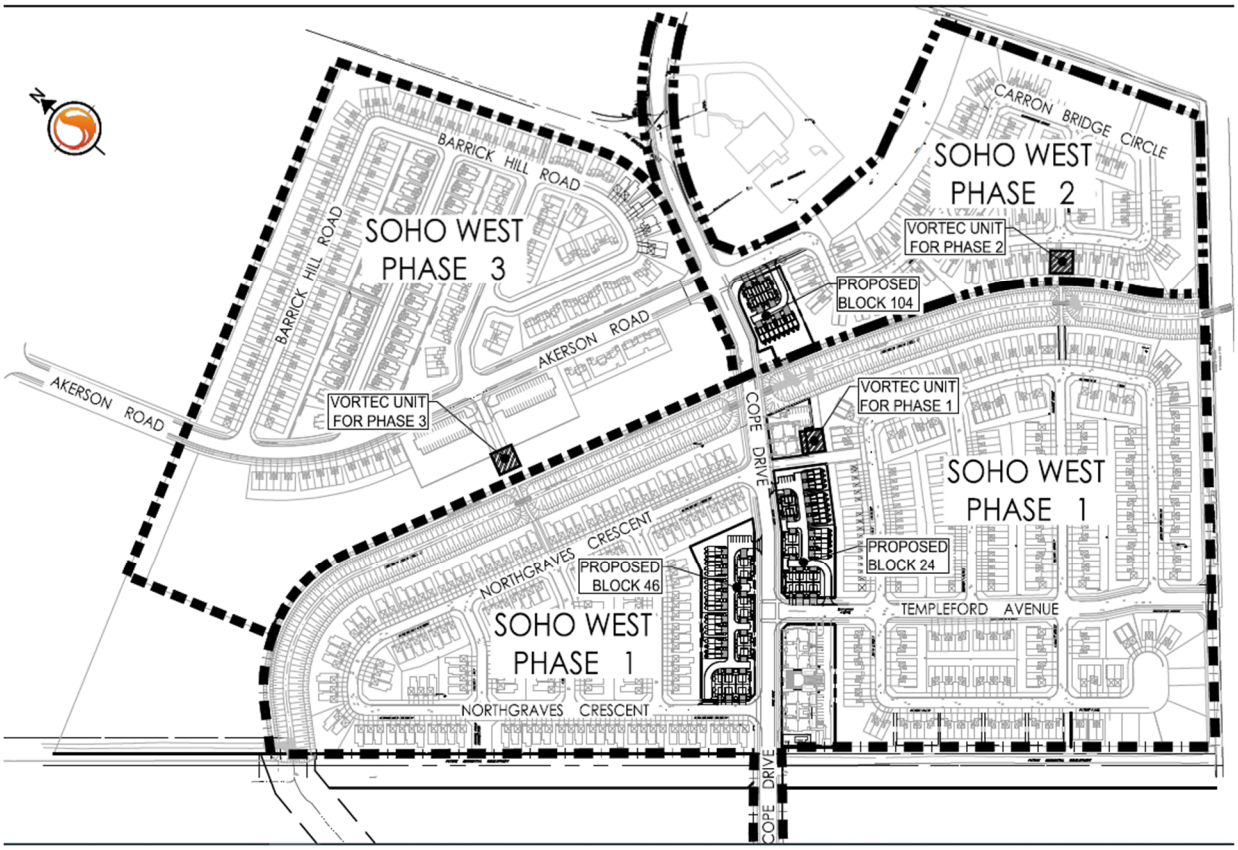


Figure 1: Key Map of Cope Drive Units Location

1 Background

This Servicing and Stormwater Management Report is prepared to present a servicing scheme that is free of conflicts and presents a suitable servicing approach that is consistent with the relevant City design guidelines. Information related to existing infrastructure is gathered from as-built drawings, approved design reports and through consultation with City of Ottawa staff and design engineers. Infrastructure requirements for water supply, sanitary sewer, and storm sewer services are presented in this report.

As coordinated with the City of Ottawa, proposed development within Block 43 (110 Cope Drive) will be submitted through a Building Permit application.

2 References

The following documents are referenced in the preparation of this report:

- Cavanagh Construction – Soho West (Phases 1 and 2), Kanata South, City of Ottawa Stormwater Management Report, Stantec Consulting Ltd., October 2007.
- Serviceability Report, Kavanagh Construction Ltd./Karam – Soho West, Rev 3, Stantec Consulting Ltd., October 31, 2007
- Summary of Geotechnical Investigation – Sohowest Area B, Eagleson Road at Fernbank Road, Ottawa, Ontario, Houle Chevrier Engineering, May 2010.
- Summary of Geotechnical Investigation – Proposed Trail west Condo Developments, Akerson Road and Cope Drive, Ottawa, Ontario, Houle Chevrier Engineering, July 21, 2015.
- Geotechnical Investigation Akerson Road and Cope Drive Development, Ottawa, Ontario, Houle Chevrier Engineering, March 3, 2016.
- Letter, Cope Drive Blocks 24,43, 46, and 104 Trails West Subdivision, Gemtec Consulting Engineers and Scientists (formerly Houle Chevrier Engineering), May 23, 2023
- City of Ottawa Design Guidelines – Water Distribution, Infrastructure Services Department, City of Ottawa, First Edition, July 2010 (and all subsequent technical bulletins).
- City of Ottawa Sewer Design Guidelines, City of Ottawa, 2014 (and all subsequent technical bulletins).

3 Potable Water Servicing

3.1 Existing Conditions

The proposed development is located within Zone 3W of the City of Ottawa water distribution system. The 3W pressure zone is fed by the Glen Cairn booster pumping station with the Stittsville elevated storage tank providing balanced storage for peak flows and demands. A 400mm diameter watermain exists along Akerson Road / Carronbridge Circle, a 300mm diameter watermain exists along Cope Drive, and 200mm diameter watermains exist along Northgraves Crescent and Templeford Avenue.

3.2 Proposed Watermain Sizing and Layout

The existing and proposed watermain alignment and sizing for each development area block is shown on **Drawing SSP-1**. Proposed watermain diameters of 150mm (nominal) are used for each block. A hydrant relocation on Carronbridge Circle is needed to accommodate to entrance to the Block 104 site.

3.2.1 CONNECTION TO EXISTING INFRASTRUCTURE

Water supply for each development area block is proposed via connections to the existing mains located within the roadways adjacent to each block. The service connections and the internal servicing layout for each development area block is shown on **Drawing SSP-1**.

The following table summarizes the number of units associated with each block and the related connection point to the existing infrastructure system.

Table 1: Connections to Existing Infrastructure

Development Area	Number of Units	Building Type	Connection Location	Existing Watermain Diameter (mm)
Block 24	32	16 Back-to-Back 16 Townhouse	Templeford Avenue	200
Block 43	8	8 Townhouse	Cope Drive	300
Block 46	40	20 Back-to-Back 20 Townhouse	Northgraves Crescent	200
Block 104	16	8 Back-to-Back 8 Townhouse	Carronbridge Circle	400

3.2.2 WATER DEMAND

The water demand for each development area block is calculated using the City of Ottawa's Water Distribution Design Guidelines with detailed calculations provided in **Appendix A.1**.

For residential developments, the average day (AVDY) per capita water demand is 280 L/cap/d. For maximum day (MXDY) demand, AVDY is multiplied by a factor of 2.5 and for peak hour (PKHR) demand, MXDY is multiplied by a factor of 2.2. The population density is taken at 2.7 person per unit for Townhomes and Back-to-Back units. The calculated residential water demand is represented in the following table.

Table 2: Residential Water Demands

Development Area	Number of Units	Population	AVDY (L/s)	MXDY (L/s)	PKHR (L/s)
Block 24	32	89	0.29	0.72	1.59
Block 43	8	22	0.07	0.19	0.41
Block 46	40	111	0.36	0.90	1.98
Block 104	16	44	0.14	0.36	0.78

3.2.3 FIRE FLOW DEMAND

The Fire Underwriter Survey (FUS) fire flow calculation spreadsheets for the governing fire flow demand scenarios are generated to calculate the expected fire flow demand for each development area block. For assessment of the worst-case fire flow requirement, building exposures were reviewed for the largest dwelling unit type within each block.

The detailed calculations are provided in **Appendix A.2** and summarized in the following table.

Table 3: FUS Fire Flow

Development Area	Number of Units	Building Type	Fire Flow (L/s)
Block 24	8	Back-to-Back - 3 Story	12,000
	6	Townhouse - 3 Story	14,000
Block 43	6	Townhouse - 3 Story	10,000
Block 46	8	Back-to-Back - 3 Story	12,000
	6	Townhouse - 3 Story	14,000
Block 104	8	Back-to-Back - 3 Story	13,000
	8	Townhouse - 3 Story	13,000

Exposure distance accounts for the difference in fire flow value for the 8-unit, 3-story back-to-back townhomes in Block 104 compared to similar buildings in Block 24 and 46.

Additional fire walls between units within each building are not considered in the FUS calculations.

3.3 Level of Service

3.3.1 ALLOWABLE PRESSURES

The City of Ottawa Water Distribution Design Guidelines state that the desired range of system pressures under normal demand conditions (i.e., basic day, maximum day, and peak hour) should be in the range of 350 to 552 kPa (50 to 80 psi) and no less than 275 kPa (40 psi) at the ground elevation in the streets (i.e., at hydrant level). The maximum pressure at any point in the distribution system in occupied areas outside of the public right-of-way is 552 kPa (80 psi).

As per the Ontario Building Code (OBC), if pressures greater than 552 kPa (80 psi) are anticipated, pressure relief measures are required. The maximum pressure at any point in the distribution system in unoccupied areas shall not exceed 689 kPa (100 psi). Under emergency fire flow conditions, the minimum pressure objective in the distribution system is 138 kPa (20 psi).

Residential buildings greater than two stories require an additional 35 kPa (5 psi) for every additional story over two stories. This additional pressure is to account for the change in elevation head and additional head loss. For example, the minimum pressure required for a two-story building is 276 kPa (40 psi) whereas a three-story building requires at least 310 kPa (45 psi) at the service connection point to provide equivalent minimum pressure on the higher floor.

3.3.2 FIRE FLOW

As per the City's technical bulletin ISDTB-2014-02 (City of Ottawa, 2014), fire flow shall be capped at 10,000 L/min for traditional side-by-side townhomes and single-family units constructed in accordance with the OBC and with a minimum separation of 10 meters between the back of adjacent units.

3.4 Hydraulic Analysis

The boundary conditions provided by the City of Ottawa are summarized in the following table. The related boundary conditions request and correspondence with the City of Ottawa are included in **Appendix A.3**.

Table 4: Boundary Conditions

Development Area	Maximum HGL		Peak Hour		Max Day plus Fire	
	Head (m)	Pressure (psi)	Head (m)	Pressure (psi)	Head (m)	Pressure (psi)
Block 24	160.9	90.8	156.4	84.4	144.3	67.1
Ground Elevation = 97.1 m						
Block 43	161.0	92.0	156.4	85.5	154.6	82.8
Ground Elevation = 96.3 m						
Block 46	160.9	90.9	156.4	84.5	143.4	66.1
Ground Elevation = 97.0 m						
Block 104	161.0	91.8	156.4	85.3	154.1	82.0
Ground Elevation = 96.4 m						

Based on the boundary conditions provided by the city, the existing watermain network provides adequate capacity to support both the residential water (Peak Hour > 40 psi) and fire flow (Max Day plus Fire >20 psi) demands.

With the operating pressures during peak hour demands anticipated to be greater than 80psi (552 kPa), pressure reducing measures are required to comply with OBC guidelines.

4 Wastewater Servicing

4.1 Existing Conditions

The Trails West development is located within the South Glen Cairn wastewater catchment area. Wastewater flow from the development is supported by the South Glen Cairn Trunk Sewer and the Hazeldean Pump Station.

The South Glenn Cairn wastewater catchment includes the Kanata South Business Park which was originally identified to be developed as mixed light industrial and commercial land uses. A serviceability report was prepared for the Soho West (now Trails West) development which examined and compared the expected peak wastewater flow rate from the study area developed as a business park versus a mixed-use development with a variety of housing types, commercial, and business park uses.

The Soho West Serviceability report concluded that the expected wastewater peak flow from the gross site area developed entirely as business park was estimated to be 88.7 L/s. The expected wastewater peak flow from the Trails West residential development and related the commercial block was found to be 67.0 L/s. Since the expected wastewater peak flow from the Trails West development was less than the peak flows from the development as a business park, it was concluded that the South Glen Cairn collector and the Hazeldean Pump Station are adequately sized to receive wastewater from the Trails West development.

4.1.1 ALLOWABLE WASTEWATER PEAK FLOW

A 450mm diameter sewer exists along Akerson Road / Carronbridge Circle, a 525mm diameter sewer exists along Cope Drive, and a 200mm diameter sewer exists in the servicing corridor south of Cope Drive at Northgraves Crescent.

A copy of the original 2007 subdivision sanitary sewer design sheet and associated Sanitary Drainage Plans are included in **Appendix B.1** for reference. From this 2007 subdivision information, the previously allocated wastewater dry weather peak flow (DWPF) and wet weather peak flow (WWPF) for the Trails West – Cope Drive Units development blocks are extracted for each development block area. The following table summarizes the information taken from the 2007 subdivision design.

Table 5: 2007 Wastewater Peak Flow

Development Area	2007 Area Reference	Number of Units	Population	DWPF (L/s)	Extraneous Flow Allowance (L/s)	WWPF (L/s))
Block 24	Block 84-A	44	119	1.93	0.16	2.09
Block 43	Cope Drive Area ‘32’	12	32	0.52	0.05	0.57
Block 46	Block 34	60	162	2.63	0.20	2.83
Block 104	Block 85	24	65	1.05	0.10	1.15

For Block 43 (2007 Area '32'), the 2007 data is interpreted based on the calculation methodology and the current 0.16 ha design area of the applicable block.

4.2 Design Criteria

As outlined in the City's Sewer Design Guidelines, the following design parameters are used to calculate estimated wastewater flow rates and to size on-site sanitary sewers.

Table 6: Wastewater Servicing Parameters

Parameter	Value
Minimum Full Flow Velocity	0.6 m/s (0.8 m/s for upstream sections)
Maximum Full Flow Velocity	3.0 m/s
Manning's roughness coefficient	0.013
Townhouse Persons per unit	2.7
Back-to-Back Persons per unit	2.7
Average Residential Flow	280 L/p/day
Harmon Peaking Factor Maximum	4.0
Extraneous Flow Allowance	0.33 L/s/ha
Maintenance Hole Spacing	120 m
Minimum Cover	2.5 m

4.3 Proposed Sewer Sizing and Layout

Wastewater servicing for the proposed development is provided through the existing wastewater collection system in the Trails West development.

4.3.1 CONNECTION TO EXISTING INFRASTRUCTURE

The sewer service for each development area block is proposed via connections to the existing sewer located within the roadways and service corridors adjacent to each block. The service connections and the internal servicing layout for each development area block is shown on **Drawing SSP-1**.

Excepting Block 46, the proposed sewer connection locations are generally consistent with the original 2007 subdivision design conditions. The 2007 connection location for Block 46 was anticipated to occur along Northgraves Crescent. The current proposed connection for Bock 46 along Cope Drive is downstream of the 2007 location so there is no relative change in the design flow condition downstream of the new connection location.

At Block 24, 46, and 104 there are Back-to-back Townhouse units that front directly onto an adjacent public road. These units are to have direct service connections to the existing sewer main in each respective public road.

For Block 24 and 46, the direct service connections to the 200mm sewer mains in Templeford Avenue and Northgraves Crescent are considered offset by the change in the overall service connection for Block 46.

At Block 104, the allocation of the direct service connections is attributed to the same maintenance hole location in Carronbridge Circle as the rest of the development area block.

No evaluation of the service capacity of the existing sewer in the public roads downstream of the direct service connections from Block 24, 46, and 104 is completed.

The following table summarizes the number of units associated with each block and the related connection point to the existing infrastructure system.

Table 7: Connections to Existing Infrastructure

Development Area	Number of Units	Building Type	Connection Location	Existing Sewer Diameter (mm)
Block 24	30	14 Back-to-Back 16 Townhouse	Servicing Corridor	200
	2	2 Back-to-Back	Templeford Avenue	200
Block 43	8	8 Townhouse	Cope Drive	525
Block 46	36	16 Back-to-Back 20 Townhouse	Cope Drive	525
	4	4 Back-to-Back	Northgraves Crescent	200
Block 104	16	8 Back-to-Back 8 Townhouse	Carronbridge Circle	450

4.3.2 WASTEWATER PEAK FLOW

The associated service areas are shown on **Drawing SA-1**. A sanitary sewer design sheet is included in **Appendix B.2**. The anticipated wastewater dry weather peak flow (DWPF) and wet weather peak flow (WWPF) for the Trails West – Cope Drive Units development blocks are summarized in the following table. The corresponding WWPF from the original 2007 subdivision design is also included for reference.

Table 8: Wastewater Peak Flow

Development Area	Number of Units	Population	DWPF (L/s)	Extraneous Flow Allowance (L/s)	WWPF (L/s))	2007 WWPF (L/s)
Block 24	30	83	0.97	0.17	1.14	2.09
	2	6	0.07	0.02	0.09	N/A
Block 43	8	22	0.26	0.05	0.31	0.57
Block 46	36	100	1.17	0.23	1.39	2.83
	4	11	0.13	0.02	0.15	N/A
Block 104	16	44	0.53	0.11	0.64	1.15

Relative to the original 2007 subdivision condition, there is no concern associated with the capacity or function of the wastewater servicing systems supporting the Cope Drive Units development area blocks.

4.3.3 HAZELDEAN PUMP STATION OVERFLOW

The Hazeldean Pump Station is designed with an overflow elevation of 95.00 m. The pump station design indicates that the water level in the pump station would be approximately 95.30 m during an overflow.

The proposed underside-of-footing (USF) elevations for the Cope Drive Units development blocks are all below the pump station overflow elevation so backwater conditions are anticipated in the event of an overflow at the pump station. To mitigate the potential impact to the Cope Drive Units development blocks, backwater valves are required on all sanitary service connections.

5 Stormwater Management

5.1 Existing Conditions

The Trails West development is located within the stormwater catchment area for Cell 1 of the Monohan Drain stormwater management (SWM) facility. Minor and major system runoff from the catchment is directed to the facility. Upstream of the minor system inlets to the Monohan Drain, water quality treatment is also provided for all applicable contributing areas.

The proposed site layouts within the Cope Drive Units development block areas are consistent with the design conditions considered by the Monohan Drain and no further evaluation of the existing facility is required.

5.1.1 ALLOWABLE STORM SEWER PEAK FLOW

A 450mm diameter storm sewer exists along Carronbridge Circle, and a 1800mm x 1200mm box section storm sewer exists along Cope Drive and in the servicing corridor south of Cope Drive at Northgraves Crescent.

A copy of the original 2007 subdivision storm sewer design sheet and associated Storm Drainage Plans are included in **Appendix C.1** for reference. From this 2007 subdivision information, the previously allocated controlled storm sewer peak flows for the Trails West – Cope Drive Units areas are extracted for each development block area. The uncontrolled storm water runoff from the permitter of each development area block is also extracted as the representative contributing area and runoff coefficient value.

The following table summarizes the information taken from the 2007 subdivision design.

Table 9: 2007 Storm Water Controlled and Uncontrolled Flow

Development Area	2007 Area Reference	100-Year Controlled Storm Sewer Peak Flow (L/s)	Uncontrolled Runoff Area (ha)	Uncontrolled Runoff Coefficient, C
Block 24	1-52A, B	66	0.24	0.66
Block 43	N/A	N/A	0.14	0.70
Block 46	1-43D, E, F, G	88	0.34	0.64
Block 104	2-OA	44	0.17	0.64

Runoff from Block 43 is accommodated by the existing storm sewer system as uncontrolled runoff with no direct storm sewer connection. There is no applicable controlled storm sewer peak flow to reference.

5.1.2 HYDRAULIC GRADE LINE CONDITION

In association with the controlled flow allocations from the development block areas, the hydraulic grade line (HGL) condition associated with the 2007 subdivision design is also considered. The following table summarizes the HGL results for the maintenance hole (MH) locations associated with the Cope Drive Units. The data is taken from the reference document - Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report (Stantec).

Table 10: 2007 Subdivision Hydraulic Grade Line Elevations

Location Reference	MH Reference	HGL Elevation (m)
Phase 1		
Northgraves Crescent	1043	94.83
	1043A	94.68
Templeford Avenue	1012	94.61
Cope Drive	1013	94.63
	1014	94.62
	1015	94.61
	1016	94.58
	1048	94.55
	1048A	94.57
Service Corridor	1052	94.50
	Diversion-1053	94.50
Phase 2		
Carronbridge Circle	2000A	94.99
	2000	94.78
	2001	94.77
	2002	94.73
	2003	94.72
	2004	94.69
	2005	94.65

The HGL conditions associated with the 2007 subdivision design are the primary comparison metric for the current SWM design associated with the Cope Drive Units.

5.2 Design Criteria and Constraints

Criteria were established by combining current design practices outlined by the City of Ottawa Design Guidelines (2012), through the various background documents and through consultation with City of Ottawa staff. The following summarizes the criteria, with the source of each criterion indicated in brackets:

General

- Major and minor flow to be conveyed the Monahan Drain, Cell 1 SWM facility for quality (80% TSS removal via upstream Vortechs® units) and quantity control.
- Use of the dual drainage principle (City of Ottawa).
- Assess impact of 100-year event and climate change event outlined in the City of Ottawa Sewer Design Guidelines on major & minor drainage system (City of Ottawa).

Storm Sewer & Inlet Controls

- Boundary conditions and HGL elevations for the storm sewer outlets based on the hydraulic conditions described in the Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report, (Stantec).
- Size storm sewers to convey the 5-year design storm event under free-flow conditions (City of Ottawa).
- The 100-year HGL is to be a minimum of 0.30 m below building foundation footing (City of Ottawa).
- Climate Change event HGL to be below building foundation footing (City of Ottawa).

Surface Storage & Overland Flow

- No surface ponding is to be permitted on site roads during the 2-year or 5-year storm event (City of Ottawa).
- Maximum depth of flow under either static or dynamic conditions shall be less than 0.35m for design storm events (i.e., up to 100-year storm) (City of Ottawa).
- Minimum clearance depth of 0.30m to be provided from rear yard spill elevation to the ground elevation at the adjacent building envelope (City of Ottawa).
- Minimum clearance depth of 0.15m to be provided from spill elevations within the proposed rights-of-way to building envelopes in proximity of overland flow routes or ponding areas (City of Ottawa).
- Water must not encroach upon proposed building envelopes and must remain below all proposed building openings during the climate change event (City of Ottawa).
- Provide adequate emergency overflow conveyance off-site (City of Ottawa).
- No rear-yard ponding volumes to be accounted for in SWM model preparation (City of Ottawa).
- The product of depth times velocity on streets not to be greater than 0.6 during the 100-year storm (City of Ottawa).

5.2.1 MODELING

A comprehensive hydrologic modeling exercise is completed with PCSWMM, accounting for the estimated major and minor systems to evaluate the storm sewer infrastructure. The use of PCSWMM for modeling of the development block area hydrology and hydraulics allowed for an analysis of the systems response during various storm events. Surface storage estimates are based on the final grading plan design (see **Drawing GP-1**). The following assumptions are applied to PCSWMM:

- Hydrologic parameters as per the City of Ottawa Sewer Design Guidelines (OSDG), including Manning's 'n', and depression storage values.
- Subcatchment infiltration parameters per Horton Infiltration method per Ottawa Sewer Design Guidelines.
- The following storm distributions are assessed: 3-hour Chicago Storm distribution for the 2, 5, and 100-year analysis.
- To 'stress test' the system a 'climate change' scenario is created by adding 20% of the individual intensity values of the 100-year Chicago storm event at their specified time step.
- Percent imperviousness calculated based on actual soft and hard surfaces on each subcatchment, converted to equivalent Runoff Coefficient using the relationship
  C = (Imp. x 0.7) + 0.2
- Subcatchment areas are defined from high-point to high-point where sags occur. Subcatchment width is determined by multiplying street segment length x 2 (length of overland flow path measured from high-point to high-point) for street (double-sided) catchments, multiplying by 1.5 for single-loaded roads, multiplying by 1.0 for single-sided catchments, or by multiplying the subcatchment area by 225m where a street segment flow path has not otherwise been defined.
- Number of catch basins (CBs) based on the proposed servicing plan. (**Drawing SSP-1**)
- CB inflow restricted with inlet-control devices (ICDs) as necessary to maintain inflow target rate, maximize use of surface storage, and eliminate standing water during the 2-year event (5-year event level of service for collector roads). CBs are not to be interconnected.
- The CB rim elevation value is set based on the top-of-grate elevation + 0.30 m for the modelling analysis. This allows the water level to rise above the rim elevation during the major storm events and allows major system routing without loss of flow (noted within the 'flooding' section of model results) in the modeled system.
- For storage on roads with defined cross-sections, active storage was modeled based on actual conduit flow using cross-sections as detailed on **Drawing DS-1**.
- HGL elevations at the downstream boundary set based on the HGL conditions identified in the 2007 Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report (Stantec).

5.2.1.1 SWMM Dual Drainage Methodology

The proposed subdivision is modeled in PCSWMM as a dual conduit system (see **Figure 2**), with: 1) circular conduits representing the sewers & junction nodes representing maintenance holes (MH); 2) irregular conduits using street-shaped cross-sections to represent the sawtoothed overland road network from high-point to low-point and storage nodes representing catchbasins. The dual drainage systems are connected via orifice link objects (or outlets) from storage node (i.e., CB) to junction (i.e., MH), and represent ICDs. Subcatchments are linked to the storage node representing the CB to direct runoff hydrographs to the minor system as the initial analysis condition.

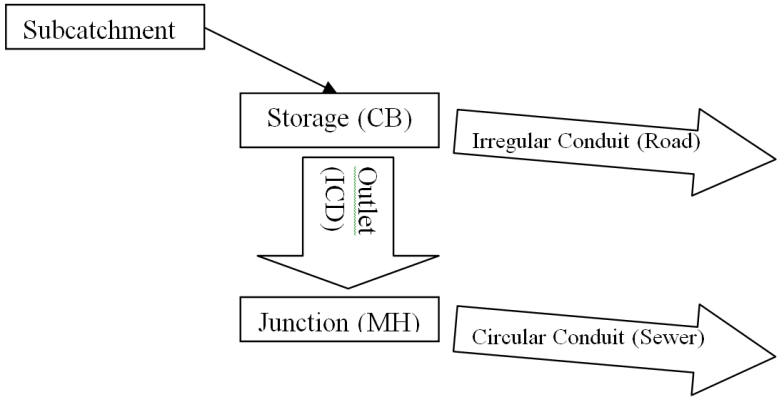


Figure 2: Schematic Representing Model Object Roles

Storage nodes are used in the model to represent CBs as well as major system junctions. For storage nodes representing CBs, the invert of the storage node represents the invert of the CB and the rim of the storage node is set at a constant increment elevation to allow for representation of depth of surface water over the storage node (to be limited to a maximum of 0.35m during the 100-year event). The additional depth is added to rim elevations to allow routing from one surface storage to the next. Storage nodes that represent CBs at sags are surrounded by two or more transects that represent the road segments forming the sag. The storage value assigned to the storage node represents only the volume available within the MH structure. If the available storage volume in a storage node is exceeded, flows spill above the storage node and into the sag in the irregular conduits (transects representing roads). The volume stored within the road sags includes the total static volume and the ponded depth above the node representing the dynamic flow depth. Flow storage volumes exceeding the sag storage available in the transect (roadway) will spill at the downstream highpoint into the next sag and continue routing through the system until ultimately flows either re-enter the minor system or reach the outfall of the major system. Storage nodes representing high points are assigned an invert elevation equal to the transect invert (spill elevation at edge of pavement) and a rim elevation equal to the maximum allowable flow depth elevation above the storage node (equal to the spill elevation at edge of pavement plus an additional 0.50 m). A storage value of zero is assigned to the high point nodes to disable linear volume calculations. No storage is considered within storage nodes at high points. In this manner, storage accumulates according to the actual ponding depths before spilling along the roadway conduit, and to the next downstream road conduit.

ICDs as represented by orifice/outlet links using a user-specified diameter and discharge coefficient or functional head relationship taken from manufacturer's specifications and City guidelines for the chosen ICD model.

Subcatchment imperviousness is calculated via impervious area measured from **Drawing SSP-1**. It is of note that recent changes in interpretation of the OSDG have introduced the requirement to determine the proposed subcatchment imperviousness based on maximum zoning constraints rather than those of the builder anticipated maximum building size or based on other prevailing criteria such as minimum tree setbacks.

5.2.1.2 Boundary Conditions

The detailed PCSWMM hydrology and the proposed storm sewers are used to assess the peak inflows and HGL for the site. HGL elevations at the downstream boundary are set based on the HGL conditions identified in the Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report.

To assess the relative changes between the 2007 subdivision HGL results and the current SWM design associated with the Cope Drive Units, it is necessary to re-create an equivalence to the 2007 conditions and analysis for comparison. The 2007 analysis used a combination of functions within the models DDSWMM and XP-SWMM. These models no longer being used but applicable data from these 2007 models is extracted and used as input into PCSWMM to re-create the 2007 conditions and HGL analysis.

The key data extracted from the 2007 DDSWMM and XP-SWMM files includes storm sewer design data, minor system inflow hydrograph data, and outfall tail water elevations. The minor system inflow hydrograph data is included in **Appendix C.1**. The storm sewer and outfall tailwater data is included in the following section with the rest of the input parameters applied to the Cope Drive Units SWM evaluation.

5.2.2 INPUT PARAMETERS

The following sections present and describe the input parameters applied to the PCSWMM analysis of the SWM design for the Cope Drive Units.

Drawing SD-1 illustrates the discretized subcatchments used in the analysis of the proposed site and outlines the major overland flow paths.

Appendix C.2 provides a PCSWMM layout figure and the input file for the 100-year 3hr Chicago storm. The PCSWMM data for the re-creation of the 2007 HGL analysis is also included in **Appendix C.2**. All other input files and results of storm scenarios are within the electronic model files provided with this report. Although this analysis was performed using PCSWMM, which provides a unique front-end graphic-user-interface to the EPA-SWMM engine, model data files can be examined in any program which can read EPA-SWMM files version 5.1.015.

5.2.2.1 Hydrologic Parameters

The following table presents the general subcatchment parameters used in the model.

Table 11: General Subcatchment Parameters

Parameter	Value
Infiltration Method	Horton
Max. Infiltration Rate (mm/hr)	76.2
Min. Infiltration Rate (mm/hr)	13.2
Decay Constant (1/hr)	4.14
Drying Time (d)	7
N Impervious	0.013
N Pervious	0.25
Dstore Imperv. (mm)	1.57
Dstore Perv. (mm)	4.67
Zero Imperv. (%)	0

The following table presents the individual parameters that vary for each of the proposed subcatchments. Allowance for the uncontrolled runoff areas around the perimeter of the development block areas is included within the minor system inflow hydrograph data extracted from the 2007 DDSWMM data files.

Table 12: General Subcatchment Parameters

Name	Outlet	Area (ha)	Width (m)	Slope (%)	Imperviousness (%)
Block 24					
C304A	CB-304	0.15	70	2	87
C306A	CB-306	0.12	70	2	87
C310A	CB-310	0.09	86	2	67
Block 46					
C502A	CB-502	0.12	82	2	54
C504A	CB-504	0.07	64	2	86
C506A	CB-506	0.11	64	2	89
C508A	CB-508	0.10	64	2	87
C512A	CB-512	0.09	85	2	69
Block 104					
C102A	CB-102	0.14	78	2	80

The following table summarizes the storage node parameters used in the model. Rim elevations for each node correspond to the rim elevation of the associated area CB plus maximum depth of storage plus an additional buffer depth to allow for potential conveyance of overland flow across high points in the road

profile. Storage curves noted as ‘functional’ are to prevent any additional storage for the node from being applied. Storage will occur within the major system conduit (transect) connecting the storage nodes within the model.

A single junction node is also included in the table. The junction is used to connect converging major system segments in Block 24.

Table 13: Storage Node Parameters

Name	Invert (m)	Rim (m)	Depth (m)	Storage Curve	Curve Name
Phase 1 Subdivision					
1001	95.32	98.25	2.93	FUNCTIONAL	*
1002	95.07	98.03	2.96	FUNCTIONAL	*
1004	94.91	97.90	2.99	FUNCTIONAL	*
1005	94.67	97.90	3.23	FUNCTIONAL	*
1006	94.44	97.75	3.31	FUNCTIONAL	*
1007	95.16	98.00	2.84	FUNCTIONAL	*
1008	94.89	97.95	3.06	FUNCTIONAL	*
1009	94.69	97.75	3.06	FUNCTIONAL	*
1010	94.44	97.65	3.21	FUNCTIONAL	*
1011	94.11	97.40	3.29	FUNCTIONAL	*
1012	93.91	97.22	3.31	FUNCTIONAL	*
1013	93.61	96.60	2.99	FUNCTIONAL	*
1014	93.53	96.82	3.29	FUNCTIONAL	*
1015	93.43	96.91	3.48	FUNCTIONAL	*
1016	93.33	96.78	3.45	FUNCTIONAL	*
1017	95.14	97.70	2.56	FUNCTIONAL	*
1018	94.85	97.80	2.95	FUNCTIONAL	*
1019	94.59	97.50	2.91	FUNCTIONAL	*
1020	94.49	97.45	2.96	FUNCTIONAL	*
1021	94.38	97.30	2.92	FUNCTIONAL	*
1022	94.88	97.50	2.62	FUNCTIONAL	*
1023	94.57	97.40	2.83	FUNCTIONAL	*
1024	94.18	97.20	3.02	FUNCTIONAL	*
1025	94.04	97.25	3.21	FUNCTIONAL	*
1026	94.76	97.55	2.79	FUNCTIONAL	*
1027	94.44	97.43	2.99	FUNCTIONAL	*
1028	94.18	97.10	2.92	FUNCTIONAL	*
1029	93.91	97.05	3.14	FUNCTIONAL	*
1030	94.38	97.20	2.82	FUNCTIONAL	*

Name	Invert (m)	Rim (m)	Depth (m)	Storage Curve	Curve Name
1031	94.01	97.10	3.09	FUNCTIONAL	*
1033	95.23	97.63	2.40	FUNCTIONAL	*
1034	95.11	97.50	2.39	FUNCTIONAL	*
1035	94.8	97.25	2.45	FUNCTIONAL	*
1036	94.6	97.45	2.85	FUNCTIONAL	*
1037	95.13	97.60	2.47	FUNCTIONAL	*
1038	94.94	97.45	2.51	FUNCTIONAL	*
1039	94.46	97.40	2.94	FUNCTIONAL	*
1040	94.76	97.25	2.49	FUNCTIONAL	*
1041	94.48	97.20	2.72	FUNCTIONAL	*
1042	94.09	97.20	3.11	FUNCTIONAL	*
1043	94.44	97.13	2.69	FUNCTIONAL	*
1044	94.65	97.10	2.45	FUNCTIONAL	*
1045	94.25	97.05	2.8	FUNCTIONAL	*
1046	93.86	96.70	2.84	FUNCTIONAL	*
1047	93.74	96.67	2.93	FUNCTIONAL	*
1048	93.24	96.50	3.26	FUNCTIONAL	*
1049	93.72	96.90	3.18	FUNCTIONAL	*
1050	93.7	96.80	3.10	FUNCTIONAL	*
1051	93.57	96.67	3.10	FUNCTIONAL	*
1052	93.1	97.10	4.00	FUNCTIONAL	*
1053	94.72	97.30	2.58	FUNCTIONAL	*
1006A	94.34	97.70	3.36	FUNCTIONAL	*
1012A	94.67	97.49	2.82	FUNCTIONAL	*
1012B	94.83	97.48	2.65	FUNCTIONAL	*
1043A	94.23	96.96	2.73	FUNCTIONAL	*
1048A	94.14	96.10	1.96	FUNCTIONAL	*
Phase 2 Subdivision					
2000	94.33	96.36	2.03	FUNCTIONAL	*
2001	94.24	96.96	2.72	FUNCTIONAL	*
2002	94.14	97.61	3.47	FUNCTIONAL	*
2003	94.11	97.62	3.51	FUNCTIONAL	*
2004	93.87	97.43	3.56	FUNCTIONAL	*
Block 24					
STM301	93.167	96.56	3.393	FUNCTIONAL	*
302_(C-STRM-NEW)	93.961	96.659	2.698	FUNCTIONAL	*
303_(C-STRM-NEW)	94.177	96.815	2.638	FUNCTIONAL	*

Name	Invert (m)	Rim (m)	Depth (m)	Storage Curve	Curve Name
304_(C-STRM-NEW)	94.040	96.575	2.535	FUNCTIONAL	*
305_(C-STRM-NEW)	94.250	96.687	2.437	FUNCTIONAL	*
306_(C-STRM-NEW)	94.310	96.882	2.572	FUNCTIONAL	*
307_(C-STRM-NEW)	94.440	97.044	2.604	FUNCTIONAL	*
308_(C-STRM-NEW)	94.400	96.850	2.450	FUNCTIONAL	*
309_(C-STRM-NEW)	94.47	96.774	2.304	FUNCTIONAL	*
310_(C-STRM-NEW)	94.519	96.813	2.294	FUNCTIONAL	*
CB-304	95.070	96.750	1.680	TABULAR	Curve7
CB-306	95.100	96.780	1.680	TABULAR	Curve7
CB-310	95.310	96.900	1.590	TABULAR	Curve6
J1	96.60	96.60	0.00	N/A	N/A
Block 46					
STM501	93.348	96.78	3.432	FUNCTIONAL	*
502_(C-STRM-NEW)	94.146	96.573	2.427	FUNCTIONAL	*
503_(C-STRM-NEW)	94.198	96.649	2.451	FUNCTIONAL	*
504_(C-STRM-NEW)	94.294	96.740	2.446	FUNCTIONAL	*
505_(C-STRM-NEW)	94.510	96.948	2.438	FUNCTIONAL	*
506_(C-STRM-NEW)	94.458	96.787	2.329	FUNCTIONAL	*
507_(C-STRM-NEW)	94.600	97.065	2.465	FUNCTIONAL	*
508_(C-STRM-NEW)	94.639	96.840	2.201	FUNCTIONAL	*
509_(C-STRM-NEW)	94.768	96.997	2.229	FUNCTIONAL	*
510_(C-STRM-NEW)	94.741	96.829	2.088	FUNCTIONAL	*
511_(C-STRM-NEW)	94.811	96.807	1.996	FUNCTIONAL	*
512_(C-STRM-NEW)	94.878	97.093	2.215	FUNCTIONAL	*
CB-502	95.100	96.870	1.770	TABULAR	Curve5
CB-504	95.190	96.880	1.690	TABULAR	Curve4
CB-506	95.220	96.810	1.590	TABULAR	Curve3
CB-508	95.180	96.860	1.680	TABULAR	Curve2
CB-512	95.250	96.870	1.620	TABULAR	Curve1
Block 104					
STM100	94.400	96.251	1.851	FUNCTIONAL	*
102_(C-STRM-NEW)	94.526	96.107	1.581	FUNCTIONAL	*
103_(C-STRM-NEW)	94.590	96.211	1.621	FUNCTIONAL	*
104_(C-STRM-NEW)	94.730	96.473	1.743	FUNCTIONAL	*
CB-102	94.700	96.340	1.640	TABULAR	Curve8
For the 2007 Subdivision HGL Re-Creation Only					
1043D	94.53	97.03	2.50	FUNCTIONAL	*

Name	Invert (m)	Rim (m)	Depth (m)	Storage Curve	Curve Name
1043E	94.74	97.00	2.26	FUNCTIONAL	*
1043F	94.91	96.86	1.95	FUNCTIONAL	*
CB1043G	95.01	96.92	1.78	FUNCTIONAL	*
1052A	94.20	97.15	2.95	FUNCTIONAL	*
1052B	94.37	97.34	2.97	FUNCTIONAL	*
2000A	94.79	96.77	1.98	FUNCTIONAL	*

5.2.2.2 Hydraulic Parameters

As per the OSDG, Manning's roughness values of 0.013 are used for sewer modeling and overland flow corridors representing roadways. Subcatchment width is determined as described in **Section 5.2.1**. A conservative slope of 2-3% is applied and runoff coefficients remain consistent with the 2007 subdivision SWM Report (Stantec).

Storm sewers are modeled to confirm flow capacities and HGL elevations in the ultimate condition. The detailed storm sewer design sheet is included in **Appendix C.3**.

Maintenance hole loss coefficients are applied as conduit exit losses with values assigned per Appendix 6-B of the OSDG assuming no flow deflector in the maintenance hole.

The following table presents the parameters for the orifice objects in the model, which represent ICDs. All orifices are assigned a discharge coefficient of 0.572 to correspond to manufacturer supplied discharge curves for IPEX Tempest HF/MHF models. Should an approved equivalent model be required, the peak outlet rate of the selected model will be required to match that of the modeled ICD at the maximum head noted in the model results portion of this report.

Table 14: Orifice Parameters

Name	Inlet	Outlet	Inlet Elev. (m)	Type	Diameter (m)
Block 24					
CB-304A-1	CB-304	304_(C-STRM-NEW)	95.07	CIRCULAR	0.095
CB-304A-2	CB-304	304_(C-STRM-NEW)	95.07	CIRCULAR	0.095
CB-306A-1	CB-306	306_(C-STRM-NEW)	95.10	CIRCULAR	0.083
CB-306A-2	CB-306	306_(C-STRM-NEW)	95.10	CIRCULAR	0.083
CB-310A-1	CB-310	310_(C-STRM-NEW)	95.31	CIRCULAR	0.083
CB-310A-2	CB-310	310_(C-STRM-NEW)	95.31	CIRCULAR	0.083
Block 46					
CB-502A-1	CB-502	502_(C-STRM-NEW)	95.10	CIRCULAR	0.102
CB-504A-1	CB-504	504_(C-STRM-NEW)	95.19	CIRCULAR	0.075
CB-504A-2	CB-504	504_(C-STRM-NEW)	95.19	CIRCULAR	0.075

Name	Inlet	Outlet	Inlet Elev. (m)	Type	Diameter (m)
CB-506A-1	CB-506	506_(C-STRM-NEW)	95.22	CIRCULAR	0.083
CB-506A-2	CB-506	506_(C-STRM-NEW)	95.22	CIRCULAR	0.083
CB-508A-1	CB-508	508_(C-STRM-NEW)	95.18	CIRCULAR	0.075
CB-508A-2	CB-508	508_(C-STRM-NEW)	95.18	CIRCULAR	0.083
CB-512A-1	CB-512	512_(C-STRM-NEW)	95.25	CIRCULAR	0.075
CB-512A-2	CB-512	512_(C-STRM-NEW)	95.25	CIRCULAR	0.070
Block 104					
CB-102A-1	CB-102	102_(C-STRM-NEW)	94.70	CIRCULAR	0.102
CB102-A-2	CB-102	102_(C-STRM-NEW)	94.70	CIRCULAR	0.102

To achieve the desired flow control condition, custom ICD sizes (< 0.083m diameter equivalent) are required within Block 46.

The following table presents the parameter applied to the PCSWMM Outfall locations for the 2007 subdivision HGL re-creation and the 100-year HGL analyses. The “outfall” locations selected are upstream of the actual outlets into Cell 1 of the Monahan Drain. However, for the purpose of this analysis they are considered representative of a suitable downstream reference location.

Table 15: Outfall Parameters

Name	Invert Elev. (m)	Rim Elev. (m)	Tide Gate	Type	Fixed Stage (m)
Diversion-1053	93.09	97.0	Yes	Fixed	94.48
2005	93.73	97.4	Yes	Fixed	94.65

For Block 24 and 46 the diversion MH ‘1053’ is selected as the “outfall” location. This simplifies the analysis by not requiring additional inputs to account for the flow diversion condition used to support the water quality enhancement system. The fixed tail water (stage) elevations applied at this Outfall is based on the 2007 subdivision analysis. However, with the difference in the nature of the 2007 models to the current model, the tail water elevation is adjusted from the 2007 analysis. This is done to generate results in the upstream storm sewer system that more closely resemble the 2007 HGL elevations at the reference MH locations. The nature of the results achieved with the HGL analysis re-creation is discussed further in **Section 5.3.3**.

For Block 104, MH ‘2—5’ is selected as the “outfall” location. This location is selected as a point that is far enough downstream of the connection point to show a representative comparison to the 2007 subdivision design. There is no adjustment to the fixed tail water (stage) elevations relative to the 2007 subdivision design.

Tide Gates are applied at each Outfall to prevent the fixed tail water elevation from moving upstream through the storm sewer system at the start of the simulation.

For the 5-year and 2-year analyses, the MH ‘STM301’ at Block 24, ‘STM501’ at Block 46, and ‘STM100’ at Block 104 are converted to Outfalls with a ‘Free’ (no tailwater) condition applied.

5.3 Proposed Storm Sewer Sizing and Layout

Storm sewer servicing for the proposed development is provided through the existing storm sewer system in the Trails West development.

5.3.1 CONNECTION TO EXISTING INFRASTRUCTURE

The storm sewer service for each development area block is proposed via connections to the existing storm sewer located within the roadways and service corridors adjacent to each block. The service connections and the internal servicing layout for each development area block is shown on **Drawing SSP-1**.

Excepting Block 46, the proposed storm sewer connection locations are generally consistent with the original 2007 subdivision design conditions. The 2007 connection location for Block 46 was anticipated to occur along Northgraves Crescent. The current proposed connection for Bock 46 along Cope Drive is downstream of the 2007 location so there is no relative change in the design flow condition downstream of the new connection location.

At Block 24 and 46 there are Back-to-Back Townhouse units that front directly onto an adjacent public road. These units are to have direct foundation drain connections to the existing storm sewer main in each respective public road. At Block 104, the foundation drain connection for the Back-to-Back Townhouse units that front Carronbridge Circle will be connected to storm sewer system within the Block.

The following table summarizes the number of units associated with each block and the related connection point to the existing infrastructure system.

Table 16: Connections to Existing Infrastructure

Development Area	Number of Units	Building Type	Connection Location	Existing Sewer Diameter (mm)
Block 24	30	14 Back-to-Back 16 Townhouse	Servicing Corridor	1800mm x 1200mm Box Section
	2	2 Back-to-Back	Templeford Avenue	825
Block 43	8	8 Townhouse	Monahan Drain	N/A
Block 46	36	16 Back-to-Back 20 Townhouse	Cope Drive	1800mm x 1200mm Box Section
	4	4 Back-to-Back	Northgraves Crescent	600
Block 104	16	8 Back-to-Back 8 Townhouse	Carronbridge Circle	450

5.3.2 MINOR AND MAJOR SYSTEM PEAK FLOW

A summary of both the uncontrolled and controlled conditions associated with the Cope Drive Units development block areas is provided in the following table.

Table 17: Storm Water Controlled and Uncontrolled Flow

Development Area	100-Year Controlled Storm Sewer Peak Flow (L/s)	Uncontrolled Runoff Area (ha)	Uncontrolled Runoff Coefficient, C
Block 24	110	0.19	0.55
Block 43	N/A	0.14	0.70
Block 46	140	0.24	0.52
Block 104	46	0.19	0.45

The storm sewer connection at Block 43 is for foundation drain support only. Runoff from Block 43 is routed directly to Cell 1 of the Monohan Drain south of Cope Drive. There is no applicable controlled storm sewer peak flow to reference.

To ensure that the 2-year and 5-year conditions are completely captured by the minor system, the 100-year storm sewer peak flow from the development block areas is greater than that previously considered with the original 2007 subdivision condition.

The uncontrolled flow area and related runoff coefficients for Block 24 and Block 46 are less than that previously considered with the original 2007 subdivision condition. Block 104 shows a 0.02 ha increase in total area and a decrease in the overall runoff coefficient. The change in the area is attributed to the nature of the current site layout. The increased area is considered part of the surface runoff that is routed directly to Cell 1 of the Monahan Drain. No further evaluation of the increase in uncontrolled runoff area from Block 104 is considered.

The following tables demonstrate the peak outflow from each modeled connection point to downstream infrastructure during the design storm events assessed.

Table 18: Storm Event Peak Discharge Rates (Minor System)

Development Area	Outlet Node	2-Year Peak Flow (m^3/s)	5-Year Peak Flow (m^3/s)	100-Year Peak Flow (m^3/s)	100-Year + 20% Peak Flow (m^3/s)
Block 24	302_(C-STRM-NEW)	0.108	0.108	0.110	0.111
Block 43	N/A	N/A	N/A	N/A	N/A
Block 46	502_(C-STRM-NEW)	0.079	0.114	0.140	0.143
Block 104	102_(C-STRM-NEW)	0.024	0.036	0.046	0.047

Table 19: Storm Event Peak Discharge Rates (Major System)

Development Area	Outlet Node	100-Year Peak Flow (m^3/s)	100-Year + 20% Peak Flow (m^3/s)
Block 24	OF2	0	0
Block 43	N/A	N/A	N/A
Block 46	OF1	0	0
Block 104	OF3	0	0.002

To confirm that there is no concern associated with the capacity or function of the storm sewer systems supporting the Cope Drive Units development area blocks, a review of the subdivision HGL conditions is completed.

5.3.3 HYDRAULIC GRADE LINE CONDITION

As noted in Section 5.2.1.2, a re-creation of the HGL analysis associated with the 2007 subdivision design is completed. The related PCSWMM information is included in **Appendix C.1** (2007 data hydrographs) and **Appendix C.2** (re-creation of 2007 analysis). The following table summarizes the results for the re-creation of the 2007 HGL analysis.

Table 20: Re-Created 2007 Subdvision Hydraulic Grade Line Elevations

Location Reference	MH Reference	HGL Elevation (m)	Difference from 2007 Result
Phase 1			
Northgraves Crescent	1043	94.79	- 0.04
	1043A	94.69	+ 0.01
Templeford Avenue	1012	94.66	+ 0.05
Cope Drive	1013	94.67	+ 0.04
	1014	94.65	+ 0.03
	1015	94.61	0.00
	1016	94.59	+ 0.01
	1048	94.55	0.00
	1048A	94.58	+ 0.01
Service Corridor	1052	94.49	- 0.01
	Diversion-1053	94.48	- 0.02
Phase 2			
Carronbridge Circle	2000A	94.91	- 0.08
	2000	94.80	+ 0.02
	2001	94.78	+ 0.01
	2002	94.73	0.00
	2003	94.72	0.00

Location Reference	MH Reference	HGL Elevation (m)	Difference from 2007 Result
	2004	94.69	0.00
	2005	94.65	0.00

Differences between the original 2007 HGL results and the re-created 2007 subdivision HGL elevations are expected. The re-created conditions are considered generally consistent with the original results. associated with the 2007 subdivision design.

For the applicable design storms, the following table presents the HGL conditions for the Cope Drive Unit development block areas and the relationship to the associated Underside-of-Footing (USF) elevations.

For Block 43, the HGL condition is taken at the adjacent subdivision maintenance hole to which the storm sewer supporting only the foundation drains within the block is connected. Because there is no storm sewer design flow from Block 43, the HGL elevation within Block 43 is considered the same as that at the adjacent subdivision maintenance hole ‘1048A’.

Table 21: Cope Drive Units Hydraulic Grade Line Elevations

Node ID	100-Year, 3-Hour HGL (m)	Lowest Adjacent USF Elevation (m)	100-Year HGL Depth below USF (m)	100-Year, 3-Hour + 20% HGL (m)	100-Year + 20% HGL Depth below USF (m)
Block 24					
STM301	94.53	N/A	N/A	94.53	N/A
302_(C-STRM-NEW)	94.59	94.95	0.36	94.60	0.35
303_(C-STRM-NEW)	94.59	94.95	0.36	94.60	0.35
304_(C-STRM-NEW)	94.65	94.95	0.30	94.65	0.30
305_(C-STRM-NEW)	94.65	94.95	0.30	94.65	0.30
306_(C-STRM-NEW)	94.82	95.12	0.30	94.83	0.29
307_(C-STRM-NEW)	94.82	95.12	0.30	94.83	0.29
308_(C-STRM-NEW)	94.84	95.16	0.32	94.85	0.31
309_(C-STRM-NEW)	94.86	N/A	N/A	94.87	N/A
310_(C-STRM-NEW)	94.87	N/A	N/A	94.88	N/A
1012	94.67	95.12	0.46	94.67	0.46
Block 43					
1048A	94.59	94.97	0.38	94.58	0.39
Block 46					
STM501	94.60	N/A	N/A	94.60	N/A
502_(C-STRM-NEW)	94.70	95.11	0.41	94.70	0.41
503_(C-STRM-NEW)	94.73	N/A	N/A	94.73	N/A
504_(C-STRM-NEW)	94.79	95.09	0.30	94.80	0.29
505_(C-STRM-NEW)	94.79	95.11	0.32	94.80	0.31

Node ID	100-Year, 3-Hour HGL (m)	Lowest Adjacent USF Elevation (m)	100-Year HGL Depth below USF (m)	100-Year, 3-Hour + 20% HGL (m)	100-Year + 20% HGL Depth below USF (m)
506_(C-STRM-NEW)	94.88	95.18	0.30	94.89	0.29
507_(C-STRM-NEW)	94.88	95.20	0.32	94.89	0.31
508_(C-STRM-NEW)	94.98	95.28	0.30	94.99	0.30
509_(C-STRM-NEW)	94.98	95.37	0.39	94.99	0.38
510_(C-STRM-NEW)	95.00	95.37	0.37	95.01	0.36
511_(C-STRM-NEW)	95.01	N/A	N/A	95.02	N/A
512_(C-STRM-NEW)	95.04	N/A	N/A	95.04	N/A
1043A	94.68	95.37	0.69	94.68	0.69
Block 104					
STM100	94.91	N/A	N/A	94.92	N/A
102_(C-STRM-NEW)	94.98	N/A	N/A	94.98	N/A
103_(C-STRM-NEW)	94.98	95.33	0.35	94.98	0.35
104_(C-STRM-NEW)	94.98	95.33	0.35	94.98	0.35

As demonstrated in the table above, the HGL elevations remain at least 0.30 m below the proposed underside of footings, and HGL elevations remain below the proposed underside of footing elevations during the 20% increased intensity ‘climate change’ scenario.

The results for the 100-Year + 20% HGL condition maintain the 2007 minor system flow hydrographs for the 100-year condition. Applicable data from a 100-year + 20% condition is not available from the 2007 Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report (Stantec).

With the Cope Drive Unit conditions considered, the following table provides a summary of the resultant HGL conditions at the applicable adjacent subdivision reference locations. The updated HGL elevations are also compared to the USF elevations described in the 2007 Cavanagh Construction – Soho West (Phases 1 and 2) SWM Report (Stantec).

Table 22: 2023 Subdvision Hydraulic Grade Line Elevations

Location Reference	MH Reference	2023 HGL Elevation (m)	HGL Elevation Change (m)	2007 Lowest Adjacent USF Elevation (m)	2023 HGL Depth below 2007 USF (m)
Phase 1					
Northgraves Crescent	1043	94.79	0.00	95.27	0.48
	1043A	94.68	- 0.01	95.27	0.59
Templeford Avenue	1012	94.67	+ 0.01	N/A	N/A
Cope Drive	1013	94.66	- 0.01	N/A	N/A
	1014	94.63	- 0.02	N/A	N/A
	1015	94.62	+ 0.01	N/A	N/A

Location Reference	MH Reference	2023 HGL Elevation (m)	HGL Elevation Change (m)	2007 Lowest Adjacent USF Elevation (m)	2023 HGL Depth below 2007 USF (m)
	1016	94.59	0.00	N/A	N/A
	1048	94.56	+ 0.01	N/A	N/A
	1048A	94.59	+ 0.01	N/A	N/A
Service Corridor	1052	94.49	0.00	N/A	N/A
	Diversion-1053	94.48	0.00	N/A	N/A
Phase 2					
Carronbridge Circle	2000A (STM100)	94.91	0.00	N/A	N/A
	2000	94.77	- 0.03	N/A	N/A
	2001	94.75	- 0.03	95.39	0.64
	2002	94.72	- 0.01	95.39	0.67
	2003	94.71	- 0.01	95.20	0.49
	2004	94.68	- 0.01	95.22	0.54
	2005	94.65	0.00	95.33	0.68

The change in the HGL conditions within the adjacent subdivision resulting from the controlled storm sewer peak flow of the Cope Drive Units is considered negligible. There is no impact on the original lowest USF elevations from the 2007 subdivision design.

5.3.4 ON-SITE STORAGE

The following table presents the maximum total surface water depths (static ponding depth + dynamic flow) above the catch basin top-of-grate elevation for the 100-year design storm and 100-Year + 20% ‘climate change’ storm.

Table 23: Cope Drive Units Maximum Surface Water Depths

Storage Node ID	Top of Grate Elevation (m)	100-Year, 3-Hour		100-Year, 3-Hour + 20%		Adjacent Building Opening Elevation (m)
		Surface HGL (m)	Surface Depth (m)	Surface HGL (m)	Surface Depth (m)	
Block 24						
CB-304	96.45	96.60	0.15	96.64	0.19	96.83
CB-306	96.48	96.61	0.13	96.65	0.17	96.85
CB-310	96.69	96.78	0.09	96.82	0.13	N/A
Block 46						
CB-502	96.48	96.60	0.12	96.63	0.15	96.95
CB-504	96.57	96.66	0.09	96.71	0.14	96.95
CB-506	96.60	96.73	0.13	96.75	0.15	96.98
CB-508	96.56	96.70	0.14	96.75	0.19	96.96

CB-512	96.63	96.77	0.14	96.80	0.17	97.20
Block 104						
CB-102	96.08	96.21	0.13	96.26	0.18	96.54

Based on the analysis results, the total ponding depth (static + dynamic) does not exceed the required 0.35m maximum during the 100-year event. Total ponding depths during the climate change scenario are below adjacent building openings and are not anticipated to impact proposed buildings within the development block areas.

There is no major system overflow from the Cope Drive Units in the 100-year design storm scenario. For the 100-year + 20% 'climate change' design storm scenario, a 0.002 m^3/s overflow occurs at Block 104 only. This overflow is not considered a significant impact to the downstream drainage system.

The following table presents the anticipated ponding depths during the 2-year and 5-year minor system design storm events.

Table 24: Cope Drive Units Minor System Deisgn Storm Ponding Depths

Storage Node ID	Top of Grate Elevation (m)	2-Year, 3-Hour		5-Year, 3-Hour	
		Maximum HGL (m)	Surface Depth (m)	Maximum HGL (m)	Surface Depth (m)
Block 24					
CB-304	96.45	95.75	0	96.42	0
CB-306	96.48	95.80	0	96.47	0
CB-310	96.69	95.60	0	95.98	0
Block 46					
CB-502	96.48	95.58	0	96.28	0
CB-504	96.57	95.59	0	95.97	0
CB-506	96.60	95.82	0	95.39	0
CB-508	96.56	95.83	0	96.46	0
CB-512	96.63	95.69	0	96.26	0
Block 104					
CB-102	96.08	95.10	0	95.52	0

Based on the analysis results, there is no surface ponding during the 2-year and 5-year minor system design storm events within the development block areas.

5.4 Water Quality Control

Water quality control for the proposed development is provided in the existing Vortechs® Systems located upstream of the Phases 1 and 2 outlets from the Trail West development in the Monohan Drain. The Vortechs® units for the Trail West development are sized for a minimum of 80% total net annual TSS removal.

Blocks 24 and 46 are accommodated in the Vortechs® Model 1929CIP supporting the Phase 1 outlet. Block 104 is accommodated in the Vortechs® Model 9000 supporting the Phase 2 outlet.

As considered by the 2007 subdivision design, runoff from Block 43 is permitted to contribute directly to the Monohan Drain.

6 Utilities

All Utilities (Hydro Ottawa, Bell Canada, Rogers Ottawa, and Enbridge Gas) are available to service the Cope Drive Units development block areas in the Trails West development.

7 Geotechnical Information and Grading

The proposed Trails West – Cope Drive Units are currently vacant properties and are generally covered with granular fill or sparse vegetation. Based on the geotechnical site investigation (Houle Chevrier, March 2016), the site subsurface conditions can generally be described as; a thin layer of fill ranging from about 0.6 to 1.5 m thick, overlying a 0.15 m thick layer of organics, over a layer of silty sand ranging from about 0.3 to 2.8 m in thickness, overlying grey silty clay ranging from about 1.3 to 3.7 m below existing surface grade.

Groundwater levels were measured on July 14, 2015 in two standpipe piezometers and were found to be between 1.4 and 1.7 m below existing grades. It should be noted that groundwater levels may be higher during wet periods of the year such as the early spring or following periods of precipitation, particularly within the upper silty sand deposits.

As described in the 2023 geotechnical investigation letter included in **Appendix D**, the development block areas proposed for the residential buildings are underlain by thick deposits of compressible silty clay which has a reduced capacity to support loads imposed by grade raise fill materials, pavement structures, etc. Groundwater lowering also causes a stress increase on the underlying silty clay deposits. As a result, the proposed site grading attempts to limit grade raises to 1.0m or less. It is noted that there are isolated areas where the grade raise exceeds 1.0m, however coordination with the Geotechnical Engineer during construction will be completed to implement appropriate mitigation measures at each applicable location.

Grading of the proposed development sites is controlled by existing grades in the adjacent properties and streets as well as stormwater management requirements such as the 0.3m clearance between the spill grade elevation in the access roads and the grade at the proposed buildings. The proposed grading plan is designed to provide overland flow outlets for each block, as outlined in the Soho West Phases 1 and 2 SWM Report (Stantec). **Drawing GP-1** illustrates the proposed grading plan.

The roads within each development area block are designed with a saw-tooth pattern to create storm water storage opportunities. Depths of ponding do not exceed 0.30 m.

Due to the presence of peat and the expected grade raises the geotechnical engineer will be consulted to confirm the most appropriate method of construction in the geotechnical sensitive regions. Upon excavation of the peat at time of construction, the Geotechnical Engineer will confirm recommendations on subgrade depths for roads, footing requirements, and pipe support.

For further details from the Geotechnical Investigations please refer to the complete reports submitted under separate cover.

8 Erosion and Sediment Control

To control erosion and migration of sediment-laden runoff off site during construction, an erosion and sediment control plan will be required for the proposed Trails West – Cope Drive Units. Additionally, an appropriate inspection and maintenance program employed by the contractor is required and will consider the following goals:

- Protection from sedimentation of the downstream existing infrastructure and water course using, but not limited to, temporary sediment traps/basins, silt fence, rock-check dams, diversion swales/berms, raised and/or covered catch basins with filter fabric, sandbags, etc.
- Re-vegetating exposed areas and slopes as soon as possible to control sediment wash-off and erosion.
- Protect exposed slopes with plastic or synthetic mulches.
- Frequent inspection of all controls during construction and after significant rainfall events (greater than 13 mm) for sediment accumulation and erosion.
- Immediate repair of all noticeable erosion, with investigation into the cause so implementation of mitigation measures to prevent recurrence will be more successful.
- Maintenance of the erosion control measures during construction.
- Preparation of monitoring reports outlining the condition of erosion control works, their overall performance, and any actions such as repairs, replacement, or modification.

The contractor will, at every rainfall, complete inspections and guarantee proper performance. The inspection is to include:

1. Verification that water is not flowing under silt barriers.
2. Clean and change sediment traps at catch basins.

Refer to **Drawing EC/DS-1** for the proposed location of silt fences, straw bales, catch basin sediment traps, and other erosion control measures.

9 Approvals

An Environmental Compliance Approval (ECA) issued by the Ontario Ministry of Environment, Conservation, and Parks (MECP) is not expected to be required for the Cope Drive Units development block areas. Each block is intended to be held as a private single ownership.

An MECP Permit to Take Water (PTTW) may be required for the development if more than 400,000 L/day of ground or surface water is to be pumped during the construction works. If between 50,000 L/day and 400,000 L/day are expected to be pumped during the construction works, registration on the Environmental Activity and Sector Registry (EASR) are required. The geotechnical consultant shall confirm prior to construction whether a PTTW or EASR registry are required for construction dewatering purposes.

No submission to the South Nation Conservation Authority (SNCA) is required.

Typical development approval requirements from The City of Ottawa, as the municipal regulatory agency, are anticipated.

10 Closing

The following summarizes key considerations for the primary servicing and stormwater management infrastructure systems supporting the Trails West – Cope Drive Units development.

10.1 Potable Water Servicing

The proposed development is located within Zone 3W of the City of Ottawa water distribution system. The 3W pressure zone is fed by the Glen Cairn booster pumping station with the Stittsville elevated storage tank providing balanced storage for peak flows and demands. A 400mm diameter watermain exists along Akerson Road / Carronbridge Circle, a 300mm diameter watermain exists along Cope Drive, and 200mm diameter watermains exist along Northgraves Crescent and Templeford Avenue.

The proposed watermain alignment and sizing achieves the desired level of service in the proposed development block area. Based on the design and related hydraulic analysis, the following is noted.

- Proposed watermain diameters of 150mm are used in each development block area.
- During peak hour (PKHR) conditions, the supporting watermain network operates above the minimum pressure objective of 40 psi (276 kPa).
- During peak hour (PKHR) conditions, the supporting watermain network operates above the maximum pressure objective of 80psi (552 kPa). Pressure reducing measures are required to comply with Ontario Building Code guidelines.
- The supporting watermain network provides sufficient fire flow while maintaining a residual pressure of 20 psi (138 kPa) in all applicable areas.

10.2 Wastewater Servicing

The Trails West development is located within the South Glen Cairn wastewater catchment area. Wastewater flow from the development is supported by the South Glen Cairn Trunk Sewer and the Hazeldean Pump Station.

A 450mm diameter sewer exists along Akerson Road / Carronbridge Circle, a 525mm diameter sewer exists along Cope Drive, and a 200mm diameter sewer exists in the servicing corridor south of Cope Drive at Northgraves Crescent. These existing sewers provide the service connections to the respective development block areas associated with the Cope Drive Units development.

The preferred cover requirement of 2.5 m for the sanitary sewer system is satisfied in all locations, and requirements for slope and velocities are met within the local internal sewers. There is no concern associated with the capacity or function of the wastewater servicing systems supporting the Cope Drive Units development area blocks.

The proposed underside-of-footing elevations for the Cope Drive Units development blocks are all below the Hazeldean Pump Station overflow elevation so backwater conditions are anticipated in the event of an overflow at the pump station. To mitigate the potential impact to the Cope Drive Units development blocks, backwater valves are required on all sanitary service connections.

10.3 Stormwater Management

The Trails West development is located within the stormwater catchment area for Cell 1 of the Monohan Drain stormwater management (SWM) facility. Minor and major system runoff from the catchment is directed to the facility. Upstream of the minor system inlets to the Monohan Drain, water quality treatment is also provided for all contributing areas.

The proposed stormwater management plan is consistent with the goals specified in the background reports and the 2012 City of Ottawa Sewer Guidelines:

- Inlet control devices are proposed to limit inflow from the site area into the minor system based on design storms derived from the City of Ottawa IDF curves.
- No ponding occurs during the 2-year and 5-year design storm events.
- The storm sewer hydraulic grade line is maintained at least 0.30 m below the underside of footing in the subdivision and downstream properties during design storm events.
- All dynamic surface water depths are less than or equal to 0.35 m during all design storm events up to the 100-year event.
- The downstream Monahan Drian Cell 1 SWM Facility has sufficient volume capacity to receive runoff volumes from the proposed site and provide the required water quantity and quality control as considered by the supporting subdivision design described in the Cavanagh Construction – Soho West (Phases 1 and 2), Kanata South, City of Ottawa Stormwater Management Report, Stantec Consulting Ltd., October 2007.

10.4 Grading

The grading for this site is designed to allow for an emergency overland flow outlet to downstream rights-of-way as per City standards and to minimize the grade raise per restrictions as recommended by the Geotechnical Investigation by Gemtec (formerly Houle Chevrier).

10.5 Approvals

An Environmental Compliance Approval (ECA) issued by the Ontario Ministry of Environment, Conservation, and Parks (MECP) is not expected to be required for the Cope Drive Units development block areas. Each block is intended to be held as a private single ownership.

An MECP Permit to Take Water (PTTW) may be required for the development if more than 400,000 L/day of ground or surface water is to be pumped during the construction works. If between 50,000 L/day and 400,000 L/day are expected to be pumped during the construction works, registration on the Environmental Activity and Sector Registry (EASR) are required. The geotechnical consultant shall confirm prior to construction whether a PTTW or EASR registry are required for construction dewatering purposes.

No submission to the South Nation Conservation Authority (SNCA) is required.

Typical development approval requirements from The City of Ottawa, as the municipal regulatory agency, are anticipated.

APPENDIX A

Appendix A Potable Water Servicing

A.1 Water Demand Calculations

Domestic Water Demand Estimates
Trails West: Cope Drive Units - 80 Cope Drive (Block 104)
Based on Site Plan from M. David Blakely Architect Inc. Dated November 2022

Densities as per City Guidelines:		
Townhomes (Row)	2.7	ppu
Back-to-Back Townhomes	2.7	ppu

Building ID	No. of Units	Population	Daily Rate of Demand (L/cap/day)	Avg Day Demand		Max Day Demand [1]		Peak Hour Demand [2]	
				(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Back-to-Back Townhomes Block 1	8	22	280	4.3	0.07	10.7	0.18	23.5	0.39
Townhouse Blocks Block 2	8	22	280	4.3	0.07	10.7	0.18	23.5	0.39
Total Site :	**16**	**44**		**8.6**	**0.14**	**21.4**	**0.36**	**47.1**	**0.78**

1. Average day water demand for residential areas: 280 L/cap/d
2. The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:
maximum day demand rate = 2.5 x average day demand rate for residential
peak hour demand rate = 2.2 x maximum day demand rate for residential

Domestic Water Demand Estimates
Trails West: Cope Drive Units - 110 Cope Drive (Block 43)
Based on Site Plan from M. David Blakely Architect Inc. Dated November 2022

Densities as per City Guidelines:		
Townhomes (Row)	2.7	ppu
Back-to-Back Townhomes	2.7	ppu

Building ID	No. of Units	Population	Daily Rate of Demand (L/cap/day)	Avg Day Demand		Max Day Demand [1]		Peak Hour Demand [2]	
				(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Townhouse Blocks									
Block 1	6	17	280	3.3	0.06	8.3	0.14	18.2	0.30
Block 2	2	6	280	1.2	0.02	2.9	0.05	6.4	0.11
Total Site :	**8**	**23**		**4.5**	**0.07**	**11.2**	**0.19**	**24.6**	**0.41**

1. Average day water demand for residential areas: 280 L/cap/d
2. The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:
maximum day demand rate = 2.5 x average day demand rate for residential
peak hour demand rate = 2.2 x maximum day demand rate for residential

Domestic Water Demand Estimates
Trails West: Cope Drive Units - 140 Cope Drive (Block 24)
Based on Site Plan from M. David Blakely Architect Inc. Dated November 2022

Densities as per City Guidelines:		
Townhomes (Row)	2.7	ppu
Back-to-Back Townhomes	2.7	ppu

Building ID	No. of Units	Population	Daily Rate of Demand (L/cap/day)	Avg Day Demand		Max Day Demand [1]		Peak Hour Demand [2]	
				(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Back-to-Back Townhomes									
Block 1	8	22	280	4.3	0.07	10.7	0.18	23.5	0.39
Block 2	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Block 3	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Townhouse Blocks									
Block 4	6	17	280	3.3	0.06	8.3	0.14	18.2	0.30
Block 5	6	17	280	3.3	0.06	8.3	0.14	18.2	0.30
Block 6	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Total Site :	**32**	**89**		**17.3**	**0.29**	**43.3**	**0.72**	**95.2**	**1.59**

1. Average day water demand for residential areas: 280 L/cap/d
2. The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:
   maximum day demand rate = 2.5 x average day demand rate for residential
   peak hour demand rate = 2.2 x maximum day demand rate for residential

Domestic Water Demand Estimates
Trails West: Cope Drive Units - 151 Cope Drive (Block 46)
Based on Site Plan from M. David Blakely Architect Inc. Dated November 2022

Densities as per City Guidelines:		
Townhomes (Row)	2.7	ppu
Back-to-Back Townhomes	2.7	ppu

Building ID	No. of Units	Population	Daily Rate of Demand (L/cap/day)	Avg Day Demand		Max Day Demand [1]		Peak Hour Demand [2]	
				(L/min)	(L/s)	(L/min)	(L/s)	(L/min)	(L/s)
Back-to-Back Townhomes									
Block 1	8	22	280	4.3	0.07	10.7	0.18	23.5	0.39
Block 2	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Block 3	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Block 4	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Townhouse Blocks									
Block 5	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Block 6	4	11	280	2.1	0.04	5.3	0.09	11.8	0.20
Block 7	6	17	280	3.3	0.06	8.3	0.14	18.2	0.30
Block 8	6	17	280	3.3	0.06	8.3	0.14	18.2	0.30
Total Site :	**40**	**111**		**21.6**	**0.36**	**54.0**	**0.90**	**118.7**	**1.98**

1. Average day water demand for residential areas: 280 L/cap/d
2. The City of Ottawa water demand criteria used to estimate peak demand rates for residential areas are as follows:
   maximum day demand rate = 2.5 x average day demand rate for residential
   peak hour demand rate = 2.2 x maximum day demand rate for residential

A.2 Fire Flow Calculations

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 140 Cope Drive (Block 24)
Date: 3/23/2023
Fire Flow Calculation #: 1
Description: 8 Unit, Back-to-Back Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		430	430	430								1290	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	12000
4	Determine Occupancy Charge	Limited Combustible										-15%	10200
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	10.1 to 20	25	3	61-80	Type V	NO				13%	1530
		East	20.1 to 30	18	2	21-49	Type V	NO				2%	
		South	> 30	25	3	61-80	Type V	NO				0%	
		West	> 30	18	3	41-60	Type V	NO				0%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**12000**
		Total Required Fire Flow in L/s											**200.0**
		Required Duration of Fire Flow (hrs)											**2.50**
		Required Volume of Fire Flow (m^3)											**1800**

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 140 Cope Drive (Block 24)
Date: 3/23/2023
Fire Flow Calculation #: 2
Description: 6 Unit, Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		335	335	335								1005	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	10000
4	Determine Occupancy Charge	Limited Combustible										-15%	8500
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	0 to 3	13	3	21-49	Type V	NO				21%	5780
		East	10.1 to 20	28	2	41-60	Type V	NO				12%	
		South	0 to 3	13	3	21-49	Type V	NO				21%	
		West	10.1 to 20	28	3	81-100	Type V	NO				14%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**14000**
		Total Required Fire Flow in L/s											**233.3**
		Required Duration of Fire Flow (hrs)											**3.00**
		Required Volume of Fire Flow (m^3)											**2520**

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 110 Cope Drive (Block 43)
Date: 3/23/2023
Fire Flow Calculation #: 3
Description: 6 Unit, Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		335	335	335								1005	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	10000
4	Determine Occupancy Charge	Limited Combustible										-15%	8500
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	10.1 to 20	13	3	21-49	Type V	NO				11%	1785
		East	20.1 to 30	13	2	21-49	Type V	NO				2%	
		South	20.1 to 30	28	3	81-100	Type V	NO				8%	
		West	> 30	13	2	21-49	Type V	NO				0%	
7	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min											10000
		Total Required Fire Flow in L/s											166.7
		Required Duration of Fire Flow (hrs)											2.00
		Required Volume of Fire Flow (m^3)											1200

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 151 Cope Drive (Block 46)
Date: 3/23/2023
Fire Flow Calculation #: 4
Description: 8 Unit, Back-to-Back Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		430	430	430								1290	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	12000
4	Determine Occupancy Charge	Limited Combustible										-15%	10200
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	10.1 to 20	25	3	61-80	Type V	NO				13%	1938
		East	> 30	18	3	41-60	Type V	NO				0%	
		South	20.1 to 30	25	2	41-60	Type V	NO				4%	
		West	20.1 to 30	18	2	21-49	Type V	NO				2%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**12000**
		Total Required Fire Flow in L/s											**200.0**
		Required Duration of Fire Flow (hrs)											**2.50**
		Required Volume of Fire Flow (m^3)											**1800**

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 151 Cope Drive (Block 46)
Date: 3/23/2023
Fire Flow Calculation #: 5
Description: 6 Unit, Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		335	335	335								1005	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	10000
4	Determine Occupancy Charge	Limited Combustible										-15%	8500
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	0 to 3	13	3	21-49	Type V	NO				21%	5780
		East	10.1 to 20	28	3	81-100	Type V	NO				14%	
		South	0 to 3	13	3	21-49	Type V	NO				21%	
		West	10.1 to 20	28	2	41-60	Type V	NO				12%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**14000**
		Total Required Fire Flow in L/s											**233.3**
		Required Duration of Fire Flow (hrs)											**3.00**
		Required Volume of Fire Flow (m^3)											**2520**

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 80 Cope Drive (Block 104)
Date: 3/23/2023
Fire Flow Calculation #: 6
Description: 8 Unit, Back-to-Back Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		430	430	430								1290	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	12000
4	Determine Occupancy Charge	Limited Combustible										-15%	10200
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	> 30	25	0	0-20	Type V	NO				0%	2346
		East	10.1 to 20	18	2	21-49	Type V	NO				11%	
		South	10.1 to 20	25	2	41-60	Type V	NO				12%	
		West	> 30	18	2	21-49	Type V	NO				0%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**13000**
		Total Required Fire Flow in L/s											**216.7**
		Required Duration of Fire Flow (hrs)											**2.50**
		Required Volume of Fire Flow (m^3)											**1950**

FUS Fire Flow Calculation Sheet - 2020 FUS Guidelines

Stantec Project #: 160401718
Project Name: Trails West: Cope Drive Units, 80 Cope Drive (Block 104)
Date: 3/23/2023
Fire Flow Calculation #: 7
Description: 8 Unit, Townhome, Wood Frame Townhouse Block

Notes: 3 Story, No fire separation

Step	Task	Notes										Value Used	Req'd Fire Flow (L/min)
1	Determine Type of Construction	Type V - Wood Frame / Type IV-D - Mass Timber Construction										1.5	-
2	Determine Effective Floor Area	Sum of All Floor Areas										-	-
		450	450	450								1350	-
3	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min										-	12000
4	Determine Occupancy Charge	Limited Combustible										-15%	10200
5	Determine Sprinkler Reduction	None										0%	0
		Non-Standard Water Supply or N/A										0%	
		Not Fully Supervised or N/A										0%	
		% Coverage of Sprinkler System										0%	
6	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	Firewall / Sprinklered ?				-	-
		North	10.1 to 20	37	3	> 100	Type V	NO				15%	2652
		East	10.1 to 20	13	2	21-49	Type V	NO				11%	
		South	> 30	37	0	0-20	Type V	NO				0%	
		West	> 30	13	2	21-49	Type V	NO				0%	
7	Determine Final Required Fire Flow	**Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min**											**13000**
		Total Required Fire Flow in L/s											**216.7**
		Required Duration of Fire Flow (hrs)											**2.50**
		Required Volume of Fire Flow (m^3)											**1950**

A.3 City of Ottawa Water Boundary Conditions

Boundary Conditions
80, 110, 140 & 151 Cope Drive

Provided Information

80 Cope Drive

Scenario	Demand	
	L/min	L/s
Average Daily Demand	8	0.14
Maximum Daily Demand	22	0.36
Peak Hour	47	0.78
Fire Flow Demand #1	13,000	216.67

110 Cope Drive

Scenario	Demand	
	L/min	L/s
Average Daily Demand	4	0.07
Maximum Daily Demand	11	0.19
Peak Hour	25	0.41
Fire Flow Demand #1	10,000	166.67

140 Cope Drive

Scenario	Demand	
	L/min	L/s
Average Daily Demand	17	0.29
Maximum Daily Demand	43	0.72
Peak Hour	95	1.59
Fire Flow Demand #1	14,000	233.33

151 Cope Drive

Scenario	Demand	
	L/min	L/s
Average Daily Demand	22	0.36
Maximum Daily Demand	54	0.90
Peak Hour	119	1.98
Fire Flow Demand #1	14,000	233.33

Location

Results

Connection 1 (80 Cope Drive) – Carronbridge Circle

Demand Scenario	Head (m)	Pressure[1] (psi)
Maximum HGL	161.0	91.8
Peak Hour	156.4	85.3
Max Day plus Fire Flow	154.1	82.0

[1] Ground Elevation = 96.4 m

Connection 2 (110 Cope Drive) – Cope Drive

Demand Scenario	Head (m)	Pressure[1] (psi)
Maximum HGL	161.0	92.0
Peak Hour	156.4	85.5
Max Day plus Fire Flow	154.6	82.8

[1] Ground Elevation = 96.3 m

Connection 3 (140 Cope Drive) – Templeford Avenue

Demand Scenario	Head (m)	Pressure[1] (psi)

Maximum HGL	160.9	90.8
Peak Hour	156.4	84.4
Max Day plus Fire Flow	144.3	67.1
[1] Ground Elevation =	97.1	m

Connection 4 (151 Cope Drive) – Northgraves Crescent

Demand Scenario	Head (m)	Pressure[1] (psi)
Maximum HGL	160.9	90.9
Peak Hour	156.4	84.5
Max Day plus Fire Flow	143.4	66.1
[1] Ground Elevation =	97.0	m

Notes

1. 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.

APPENDIX B

Appendix B Wastewater Servicing

B.1 2007 Subdivision Sanitary Design

Stantec

Cavanagh Construction

Trail West Cope Drive Units Revision - SOHO Development Phase 1 and 2 Sanitary Design

DATE: April 2007
REVISION: August 2015
DESIGNED BY: MJS
CHECKED BY: AMP

SANITARY SEWER DESIGN SHEET

(City of Ottawa)

FILE NUMBER: 1604-01157

***Soho West Development Phases 1 and 2 sanitary design revised to assess impacts of proposed Trail West Cope Drive Units, shown highlighted**

DESIGN PARAMETERS

AVG. DAILY FLOW / PERSON =	350	L/p/day	COMMERCIAL	50,000.00	L/ha/day
MINIMUM VELOCITY =	0.60	m/s	LIGHT INDUSTRIAL	35,000.00	L/ha/day
n =	0.013		INSTITUTIONAL	0.60	L/s/ha
MAX PEAK FACTOR =	4.0		INFILTRATION	0.28	L/s/ha
MIN PEAK FACTOR =	2.4		RESIDENTIAL HARMON PEAKING FACTOR	PERSONS/UNIT =	4.0
			KANATA WEST REPORT	PERSONS/UNIT =	3.0
Peaking Factor Industrial:	1.5		POPULATION DENSITY PER UNIT =	1 bed Apartment =	1.4
Peaking Factor Comm. / Inst.:	1.5			2 bed Apartment =	2.1
				Townhouse =	2.7

LOCATION			RESIDENTIAL AREA AND POPULATION										COMM		INDUST		INSTIT		C+I+I	INFILTRATION				PIPE					
STREET	FROM M.H.	TO M.H.	AREA (ha)	UNITS 1bed Apt	UNITS 2bed Apt	UNITS Towns	UNITS* (KWR)	POP.	CUMULATIVE AREA (ha)	CUMULATIVE POP.	PEAK FACT.	PEAK FLOW (L/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (L/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (L/s)	**TOTAL FLOW (L/s)**	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (L/s)	(FULL) (m/s)	VEL. (ACT.) (m/s)
Phase 1																													
PATRIOT PLACE	101	102	0.80			14	0	38	0.80	38	4.00	0.62							0.00	0.80	0.80	0.224	**0.84**	40.5	200	0.65	26.88	0.84	0.34
PATRIOT PLACE	102	104	0.55			16	0	43	1.35	81	4.00	1.31							0.00	0.55	1.35	0.378	**1.69**	76.9	200	0.45	22.40	0.70	0.36
PATRIOT PLACE	104	105	0.37			13	0	35	1.72	116	4.00	1.88							0.00	0.37	1.72	0.482	**2.36**	64.0	200	0.45	22.40	0.70	0.43
PATRIOT PLACE	105	106	0.60			21	0	57	2.32	173	4.00	2.80							0.00	0.60	2.32	0.650	**3.45**	98.0	200	0.45	22.40	0.70	0.48
PATRIOT PLACE	106	109	0.73			24	0	65	3.05	238	4.00	3.86							0.00	0.73	3.05	0.854	**4.71**	81.0	200	0.45	22.40	0.70	0.53
TABARET STREET	104	107	0.43			12	0	32	0.43	32	4.00	0.52							0.00	0.43	0.43	0.120	**0.64**	83.8	200	0.70	27.84	0.87	0.35
TEMPLEFORD AVENUE	107	108	0.48			6	0	16	0.91	48	4.00	0.78							0.00	0.48	0.91	0.255	**1.04**	81.0	200	0.45	22.40	0.70	0.33
TEMPLEFORD AVENUE	108	109	0.31			6	0	16	1.22	64	4.00	1.04							0.00	0.31	1.22	0.342	**1.38**	81.0	200	0.45	22.40	0.70	0.36
TEMPLEFORD AVENUE	109	110	0.11			0	0	0	4.38	302	4.00	4.89							0.00	0.11	4.38	1.226	**6.12**	53.6	200	0.84	30.72	0.96	0.71
PROPOSED BLOCK 1	SAN 4	Stub to 110	0.48	8	40	0	0	96	0.48	96	4.00	1.56							0.00	0.48	0.48	0.134	**1.69**	4.0	200	0.40	21.12	0.66	0.38
TEMPLEFORD AVENUE	110	147	0.08			0	0	0	4.94	398	4.00	6.45							0.00	0.08	4.94	1.383	**7.83**	46.5	200	1.18	36.48	1.14	0.87
NORTHGRAVES	129	130	0.20			3	0	8	0.20	8	4.00	0.13							0.00	0.20	0.20	0.056	**0.19**	13.0	200	0.65	26.88	0.84	0.00
NORTHGRAVES	130	131	0.59			13	0	35	0.79	43	4.00	0.70							0.00	0.59	0.79	0.221	**0.92**	105.2	200	0.45	22.40	0.70	0.33
NORTHGRAVES	131	132	0.35			6	0	16	1.14	59	4.00	0.96							0.00	0.35	1.14	0.319	**1.28**	78.0	200	0.45	22.40	0.70	0.33
NORTHGRAVES	132	133	0.42			9	0	24	1.56	83	4.00	1.34							0.00	0.42	1.56	0.437	**1.78**	78.0	200	0.45	22.40	0.70	0.36
NORTHGRAVES	133	133A	0.26			6	0	16	1.82	99	4.00	1.60							0.00	0.26	1.82	0.510	**2.11**	55.4	200	0.45	22.40	0.70	0.41
PROPOSED BLOCK 46	SAN 1	Stub to 133A	0.73	64	32	0	0	157	0.73	157	4.00	2.54							0.00	0.73	0.73	0.204	**2.74**	2.0	200	0.40	21.12	0.66	0.44
NORTHGRAVES	133A	146	0.16			4	0	11	2.71	267	4.00	4.33							0.00	0.16	2.71	0.759	**5.09**	43.2	200	1.09	34.88	1.09	0.75
COPE DR ***	STUB	145B	125.14			0	0	8075	125.14	8075	3.05	99.77			28.72	28.72			17.45	153.86	153.86	43.081	**160.30**	20.4	525	0.25	223.00	1.00	1.09
COPE DR	145B	145A	0.09			0	0	0	125.23	8075	3.05	99.77				28.72			17.45	0.09	153.95	43.106	**160.33**	34.4	525	0.25	223.00	1.00	1.09
COPE DR	145A	145	0.12			0	0	0	125.35	8075	3.05	99.77				28.72			17.45	0.12	154.07	43.140	**160.36**	46.4	525	0.25	223.00	1.00	1.09
COPE DR	145	146	23.14			0	0	2811	148.49	10886	2.92	128.77				28.72			17.45	23.14	177.21	49.619	**195.84**	78.0	525	0.25	223.00	1.00	1.14
HENBURY WAY	134A	134	0.43			9	0	24	0.43	24	4.00	0.39							0.00	0.43	0.43	0.120	**0.51**	58.3	200	0.65	26.88	0.84	0.00
HENBURY WAY	134	141	0.06			0	0	0	0.49	24	4.00	0.39							0.00	0.06	0.49	0.137	**0.53**	42.6	200	0.65	26.88	0.84	0.00
ALSON MILLS WAY	135	136	0.68			16	0	43	0.68	43	4.00	0.70							0.00	0.68	0.68	0.190	**0.89**	79.9	200	0.65	26.88	0.84	0.34
ALSON MILLS WAY	136	142	0.06			0	0	0	0.74	43	4.00	0.70							0.00	0.06	0.74	0.207	**0.91**	41.6	200	0.82	30.40	0.95	0.38
WHITEFORD WAY	137	138	0.81			22	0	59	0.81	59	4.00	0.96							0.00	0.81	0.81	0.227	**1.19**	101.1	200	0.78	29.44	0.92	0.43
WHITEFORD WAY	138	143	0.18			2	0	5	0.99	64	4.00	1.04							0.00	0.18	0.99	0.277	**1.32**	54.4	200	0.78	29.44	0.92	0.43
NORTHGRAVES	129	139	0.22			4	0	11	0.22	11	4.00	0.18							0.00	0.22	0.22	0.062	**0.24**	26.7	200	0.65	26.88	0.84	0.00
NORTHGRAVES	139	140	0.29			7	0	19	0.51	30	4.00	0.49							0.00	0.29	0.51	0.143	**0.63**	31.2	200	0.45	22.40	0.70	0.28
NORTHGRAVES	140	141	0.64			16	0	43	1.15	73	4.00	1.18							0.00	0.64	8.00	2.240	**3.42**	87.6	200	0.65	26.88	0.84	0.55
NORTHGRAVES	141	142	0.60			16	0	43	2.24	140	4.00	2.27							0.00	0.60	9.09	2.545	**4.82**	85.7	200	0.35	19.84	0.62	0.50
NORTHGRAVES	142	143	0.57			15	0	41	3.55	224	4.00	3.63							0.00	0.57	10.40	2.912	**6.54**	79.8	200	0.55	24.96	0.78	0.64
NORTHGRAVES	143	144	0.44			11	0	30	4.98	318	4.00	5.15							0.00	0.44	11.83	3.312	**8.46**	60.0	200	0.69	27.84	0.87	0.76
NORTHGRAVES	144	149	0.42			10	0	27	5.40	345	4.00	5.59							0.00	0.42	12.25	3.430	**9.02**	64.5	200	0.69	27.84	0.87	0.77
TABARET STREET	111A	111	0.67			24	0	65	0.67	65	4.00	1.05							0.00	0.67	0.67	0.188	**1.24**	84.5	200	0.45	22.40	0.70	0.33
TABARET STREET	111	119	0.70			22	0	59	1.37	124	2.40	1.21							0.00	0.70	0.70	0.196	**1.41**	116.0	200	0.45	22.40	0.70	
REGIMENT AVENUE	112A	112	0.57			20	0	54	0.57	54	4.00	0.88							0.00	0.57	0.57	0.160	**1.04**	68.8	200	0.65	26.88	0.84	0.34
REGIMENT AVENUE	112	113	0.65			21	0	57	1.22	111	4.00	1.80							0.00	0.65	1.22	0.342	**2.14**	91.8	200	0.70	27.84	0.87	0.45
REGIMENT AVENUE	113	121	0.02			0	0	0	1.24	111	2.40	1.08							0.00	0.02	1.24	0.347	**1.43**	21.8	200	0.70	27.84	0.87	

Stantec

Cavanagh Construction

Trail West Cope Drive Units Revision - SOHO Development Phase 1 and 2 Sanitary Design

DATE: April 2007
REVISION: August 2015
DESIGNED BY: MJS
CHECKED BY: AMP

SANITARY SEWER DESIGN SHEET

(City of Ottawa)

FILE NUMBER: 1604-01157

***Soho West Development Phases 1 and 2 sanitary design revised to assess impacts of proposed Trail West Cope Drive Units, shown highlighted**

DESIGN PARAMETERS

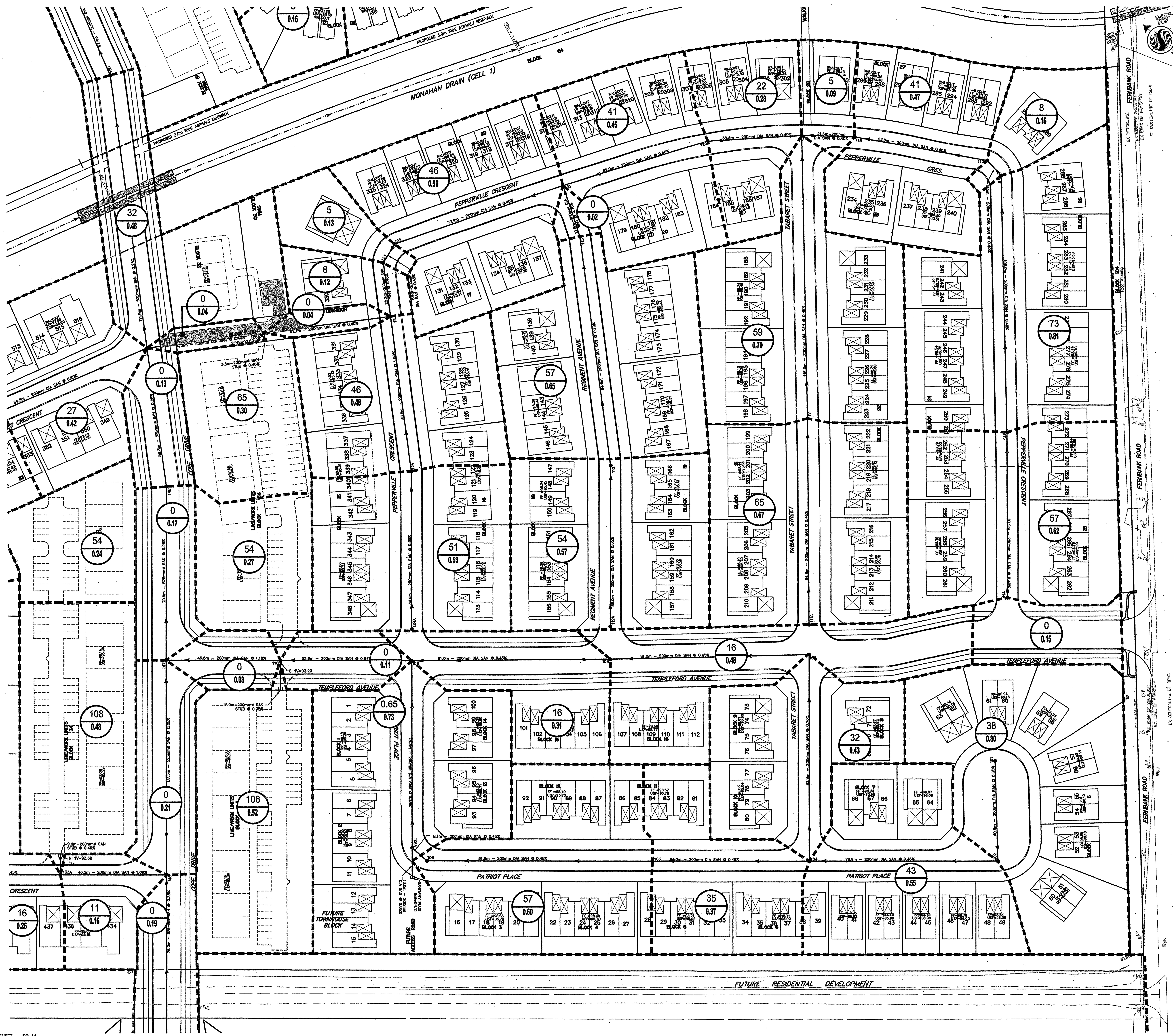
AVG. DAILY FLOW / PERSON =	350	L/p/day	COMMERCIAL	50,000.00	L/ha/day
MINIMUM VELOCITY =	0.60	m/s	LIGHT INDUSTRIAL	35,000.00	L/ha/day
n =	0.013		INSTITUTIONAL	0.60	L/s/ha
MAX PEAK FACTOR =	4.0		INFILTRATION	0.28	L/s/ha
MIN PEAK FACTOR =	2.4		RESIDENTIAL HARMON PEAKING FACTOR	PERSONS/UNIT =	4.0
			KANATA WEST REPORT	PERSONS/UNIT =	3.0
Peaking Factor Industrial:	1.5		POPULATION DENSITY PER UNIT =	1 bed Apartment =	1.4
Peaking Factor Comm. / Inst.:	1.5			2 bed Apartment =	2.1
				Townhouse =	2.7

LOCATION			RESIDENTIAL AREA AND POPULATION						CUMULATIVE				COMM		INDUST		INSTIT		C+I+I	INFILTRATION				PIPE					
STREET	FROM M.H.	TO M.H.	AREA (ha)	UNITS 1bed Apt	UNITS 2bed Apt	UNITS Towns	UNITS* (KWR)	POP.	AREA (ha)	POP.	PEAK FACT.	PEAK FLOW (L/s)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	AREA (ha)	ACCU. AREA (ha)	PEAK FLOW (L/s)	TOTAL AREA (ha)	ACCU. AREA (ha)	INFILT. FLOW (L/s)	**TOTAL FLOW (L/s)**	DIST (m)	DIA (mm)	SLOPE (%)	CAP. (FULL) (L/s)	VEL. (FULL) (m/s)	VEL. (ACT.) (m/s)
PEPPERVILLE CRESCENT	114	115	0.62			21	0	57	0.62	57	4.00	0.92							0.00	0.62	0.62	0.174	**1.09**	67.6	200	0.40	21.12	0.66	0.31
PEPPERVILLE CRESCENT	115	116	0.81			27	0	73	1.43	130	4.00	2.11							0.00	0.81	1.43	0.400	**2.51**	105.0	200	0.40	21.12	0.66	0.41
PEPPERVILLE CRESCENT	116	117	0.16			3	0	8	1.59	138	4.00	2.24							0.00	0.16	1.59	0.445	**2.69**	8.5	200	0.40	21.12	0.66	0.44
PEPPERVILLE CRESCENT	117	118	0.47			15	0	41	2.06	179	4.00	2.90							0.00	0.47	2.06	0.577	**3.48**	55.0	200	0.40	21.12	0.66	0.48
PEPPERVILLE CRESCENT	118	119	0.09			2	0	5	2.15	184	4.00	2.98							0.00	0.09	2.15	0.602	**3.58**	21.6	200	0.40	21.12	0.66	0.48
PEPPERVILLE CRESCENT	119	120	0.28			8	0	22	3.80	330	4.00	5.35							0.00	0.28	3.13	0.876	**6.23**	38.4	200	0.40	21.12	0.66	0.56
PEPPERVILLE CRESCENT	120	121	0.45			15	0	41	4.25	371	4.00	6.01							0.00	0.45	3.58	1.002	**7.01**	62.0	200	0.40	21.12	0.66	0.58
PEPPERVILLE CRESCENT	121	122	0.56			17	0	46	6.05	528	3.96	8.47							0.00	0.56	5.38	1.506	**9.98**	72.9	200	0.40	21.12	0.66	0.65
PEPPERVILLE CRESCENT	122	123	0.13			2	0	5	6.18	533	3.96	8.55							0.00	0.13	5.51	1.543	**10.09**	8.9	200	0.40	21.12	0.66	0.65
PEPPERVILLE CRESCENT	123	125	0.12			3	0	8	6.30	541	3.96	8.68							0.00	0.12	5.63	1.576	**10.26**	22.3	200	0.45	22.40	0.70	0.68
PEPPERVILLE CRESCENT	124A	124	0.53			19	0	51	0.53	51	4.00	0.83							0.00	0.53	0.53	0.148	**0.98**	64.6	200	0.50	23.68	0.74	0.35
PEPPERVILLE CRESCENT	124	125	0.48			17	0	46	1.01	97	4.00	1.57							0.00	0.48	1.01	0.283	**1.85**	63.9	200	1.50	40.96	1.28	0.60
EASEMENT	125	125A	0.04			0	0	0	7.35	638	3.92	10.13							0.00	0.04	6.68	1.870	**12.00**	52.1	200	0.40	21.12	0.66	0.68
EASEMENT/PROPOSED BLOCK 24	SAN 6	125A	0.56	24	40	0	0	118	0.56	118	4.00	1.91							0.00	0.56	0.56	0.157	**2.07**	14.2	200	0.40	21.12	0.66	0.38
EASEMENT/PROPOSED BLOCK 43	125A	149	0.16		12	0		26	8.07	782	3.87	12.26							0.00	0.16	7.40	2.072	**14.33**	47.9	200	0.40	21.12	0.66	0.71
COPE DR	146	147	0.21			0	0	0	151.41	11153	2.91	131.47				28.72			17.45	0.21	177.42	49.678	**198.60**	87.5	525	0.25	223.00	1.00	1.14
COPE DR	147	148	0.17			0	0	0	156.52	11551	2.89	135.23				28.72			17.45	0.17	182.53	51.108	**203.79**	70.9	525	0.25	223.00	1.00	1.15
COPE DR	148	149	0.13			0	0	0	156.65	11551	2.89	135.23				28.72			17.45	0.13	182.66	51.145	**203.83**	58.3	525	0.25	223.00	1.00	1.15
COPE DR	149	150	0.48			0	0	0	170.60	12678	2.85	146.37				28.72			17.45	0.48	202.79	56.781	**220.60**	111.9	525	0.25	223.00	1.00	1.16
COPE DR	150	151	0.13			0	0	0	170.73	12678	2.85	146.37				28.72			17.45	0.13	202.92	56.818	**220.64**	57.4	525	0.25	223.00	1.00	1.16
WESTHALL WAY	210	209	0.29			8	0	22	0.29	22	4.00	0.36							0.00	0.29	0.29	0.081	**0.44**	56.0	200	0.65	26.88	0.84	0.00
WESTHALL WAY	209	206	0.21			6	0	16	0.50	38	4.00	0.62							0.00	0.21	0.50	0.140	**0.76**	46.1	200	0.50	23.68	0.74	0.30
CARRONBRIDGE CIRCLE	202	201	0.13			3	0	8	0.13	8	4.00	0.13							0.00	0.13	0.13	0.036	**0.17**	8.3	200	0.65	26.88	0.84	0.00
CARRONBRIDGE CIRCLE	201	210	0.45			13	0	35	0.58	43	4.00	0.70							0.00	0.45	0.58	0.162	**0.86**	55.8	200	0.50	23.68	0.74	0.30
CARRONBRIDGE CIRCLE	210	211	0.43			12	0	32	1.01	75	4.00	1.22							0.00	0.43	1.01	0.283	**1.50**	70.2	200	0.50	23.68	0.74	0.38
CARRONBRIDGE CIRCLE	211	212	0.21			4	0	11	1.22	86	4.00	1.39							0.00	0.21	1.22	0.342	**1.73**	11.0	200	0.50	23.68	0.74	0.38
CARRONBRIDGE CIRCLE	212	213	0.45			14	0	38	1.67	124	4.00	2.01							0.00	0.45	1.67	0.468	**2.48**	54.2	200	0.50	23.68	0.74	0.46
CARRONBRIDGE CIRCLE	213	214	0.33			9	0	24	2.00	148	4.00	2.40							0.00	0.33	2.00	0.560	**2.96**	54.8	200	0.50	23.68	0.74	0.49
CARRONBRIDGE CIRCLE	202	203	0.56			17	0	46	0.56	46	4.00	0.75							0.00	0.56	0.56	0.157	**0.91**	72.3	200	0.40	21.12	0.66	0.31
CARRONBRIDGE CIRCLE	203	204	0.24			4	0	11	0.80	57	4.00	0.92							0.00	0.24	0.80	0.224	**1.14**	14.1	200	0.45	22.40	0.70	0.33
CARRONBRIDGE CIRCLE	204	205	0.18			5	0	14	0.98	71	4.00	1.15							0.00	0.18	0.98	0.274	**1.42**	34.0	200	0.45	22.40	0.70	0.36
CARRONBRIDGE CIRCLE	205	206	0.15			3	0	8	1.13	79	4.00	1.28							0.00	0.15	1.13	0.316	**1.60**	32.7	200	0.45	22.40	0.70	0.36
CARRONBRIDGE CIRCLE	206	207	0.23			6	0	16	1.86	133	4.00	2.16							0.00	0.23	1.86	0.521	**2.68**	33.4	200	0.45	22.40	0.70	0.43
CARRONBRIDGE CIRCLE	207	208	0.24			7	0	19	2.10	152	4.00	2.46							0.00	0.24	2.10	0.588	**3.05**	34.3	200	0.45	22.40	0.70	0.46
CARRONBRIDGE CIRCLE	208	214	0.45			11	0	30	2.55	182	4.00	2.95							0.00	0.45	2.55	0.714	**3.66**	50.6	200	1.00	33.60	1.05	0.65
CARRONBRIDGE CIRCLE	214	215	0.17			4	0	11	4.72	341	4.00	5.53							0.00	0.17	4.72	1.322	**6.85**	32.1	200	0.50	23.68	0.74	0.63
CARRONBRIDGE CIRCLE	215	216	0.34			8	0	22	5.06	363	4.00	5.88							0.00	0.34	5.06	1.417	**7.30**	37.6	200	0.50	23.68	0.74	0.64
CARRONBRIDGE CIRCLE	216	217	0.23			6	0	16	5.29	379	4.00	6.14							0.00	0.23	5.29	1.481	**7.62**	39.3	200	0.50	23.68	0.74	0.65
CARRONBRIDGE CIRCLE	217	218	0.16			3	0	8	5.45	387	4.00	6.27							0.00	0.16	5.45	1.526	**7.80**	10.5	200	0.50	23.68	0.74	0.65
CARRONBRIDGE CIRCLE	218	219	0.33			9	0	24	5.78	411	4.00	6.66							0.00	0.33	5.78	1.618	**8.28**	42.7	200	0.50	23.68	0.74	0.67
CARRONBRIDGE CIRCLE **	219	151A	0.14			0	0	0	5.92	411	4.00	6.66							0.00	0.14	5.92	1.658	**63.32**	45.9	450	0.16	118.08	0.72	0.73
PROPOSED BLOCK 104	SAN 9	151A	0.33	20	20	0	0	70	0.33	70	4.00	1.13							0.00	0.33	0.33	0.092	**1.22**	42.2	200	0.50	23.68	0.74	0.35
AKERSON **	151A	151	0.12			0	0	0	6.37	481	3.98	7.76							0.00	0.12	6.37	1.784	**64.54**	50.2	450	0.16	118.08	0.72	0.73
COPE / AKERSON **	151	EX.	0.01			0	0	0	177.11	13159	2.84	151.39				28.72			17.45	0.01	209.30	58.604	**282.44**	3.4	600	0.25	321.20	1.10	1.25

* Population Derived from average of High Density and Mediurr 122.5 persons/gross ha

** Added flow of 55L/s generated from Bridelwood Trails

*** Added future residential area = 125ha, population 8075 and Industrial area of 28.72ha (See OMM/Trow Drawing MP 14589-SA1 Rev 5)



ORIGINAL SHEET – ISO A1

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Legend

PROPOSED SANITARY SEWER

10 — POPULATION
0.09 — SANITARY DRAINAGE AREA (ha)

LIMIT OF SANITARY DRAINAGE AREA

Notes

	Revision	By	Appd.	YY.MM.DD
3	REVISED AS PER CITY COMMENTS AND FINAL APPROVAL	KJK	JBL	07.10.29
2	REVISED AS PER CITY COMMENTS	KJK	JBL	07.08.17
1	ISSUED FOR CITY COMMENTS	KJK	JBL	07.07.12

File Name: 160400502C-SAN	NI	JBL	KJK	07.03.14
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
J. B. LACHANCE
Oct. 31/07
PROVINCE OF ONTARIO

Client/Project

CAVANAGH CONSTRUCTION LTD.

SOHO - KANATA SOUTH

Ottawa ON Canada

Title

SANITARY DRAINAGE PLAN

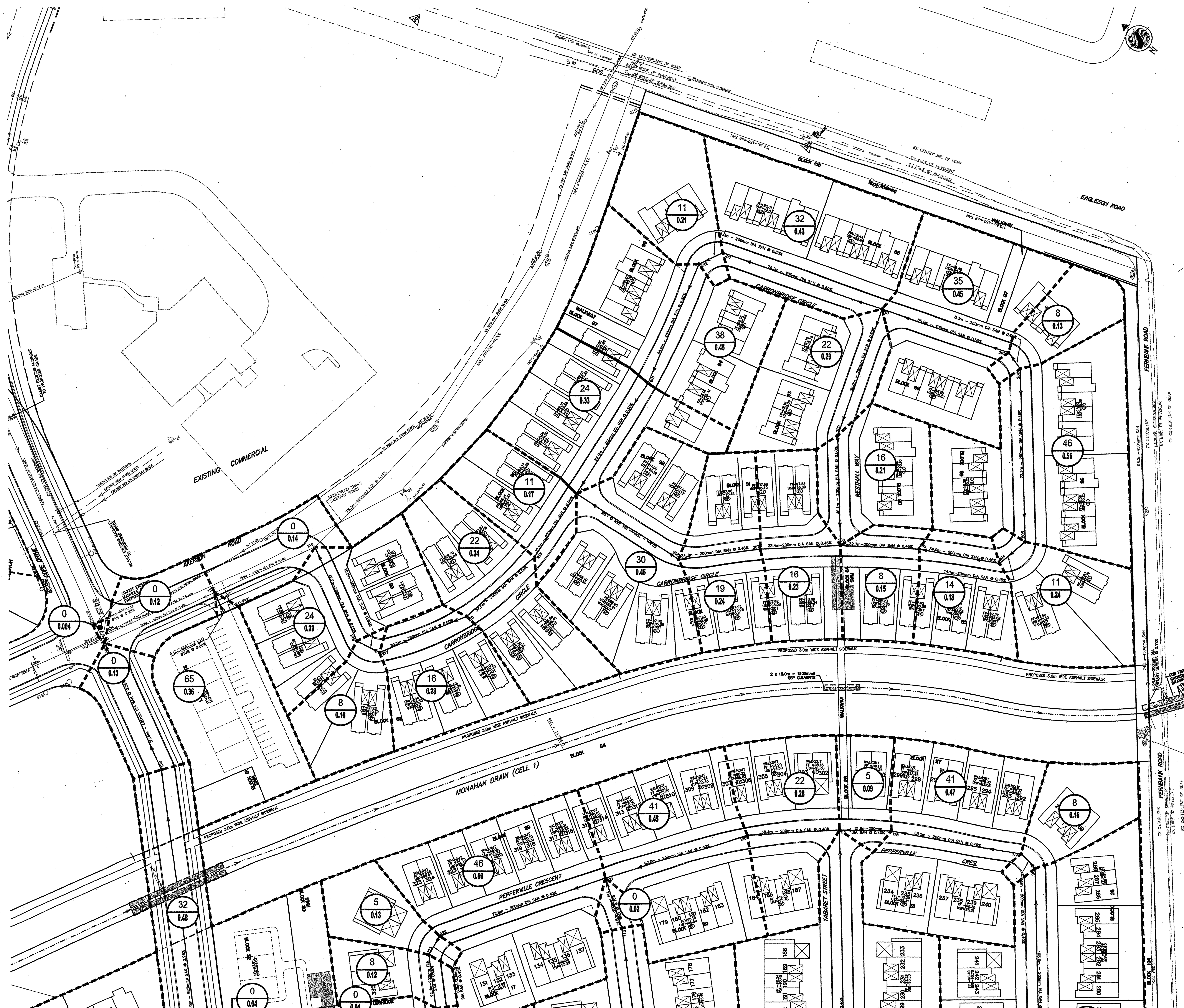
Project No. 160400502C

Scale 1:750 (0, 7.5, 22.5, 37.5m)

Drawing No. SAN-2

Sheet 55 of 58

Revision 3



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Legend

PROPOSED SANITARY SEWER

10 / 0.09 — POPULATION / SANITARY DRAINAGE AREA (ha)

LIMIT OF SANITARY DRAINAGE AREA

Notes

	Revision	By	Appd.	YY.MM.DD
3	REVISED AS PER CITY COMMENTS AND FINAL APPROVAL	KJK	JBL	07.10.29
2	REVISED AS PER CITY COMMENTS	KJK	JBL	07.08.17
1	ISSUED FOR CITY COMMENTS	KJK	JBL	07.07.12

File Name: 160400502C-SAN	NI	JBL	KJK	07.03.14
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

J. B. LACHANCE
PROVINCE OF ONTARIO

Client/Project

CAVANAGH CONSTRUCTION LTD.

SOHO - KANATA SOUTH

Ottawa ON Canada

Title

SANITARY DRAINAGE PLAN

Project No. 160400502C

Scale 1:750 (0 7.5 22.5 37.5m)

Drawing No. SAN-3

Sheet 56 of 58

Revision 3

B.2 Sanitary Sewer Design Sheet

Stantec

SUBDIVISION:
Cavanagh Construction - Cope Drive Units

DATE: 4/12/2023
REVISION: 2
DESIGNED BY: WAJ
CHECKED BY: -

SANITARY SEWER DESIGN SHEET
(City of Ottawa)

FILE NUMBER: 160401718

DESIGN PARAMETERS

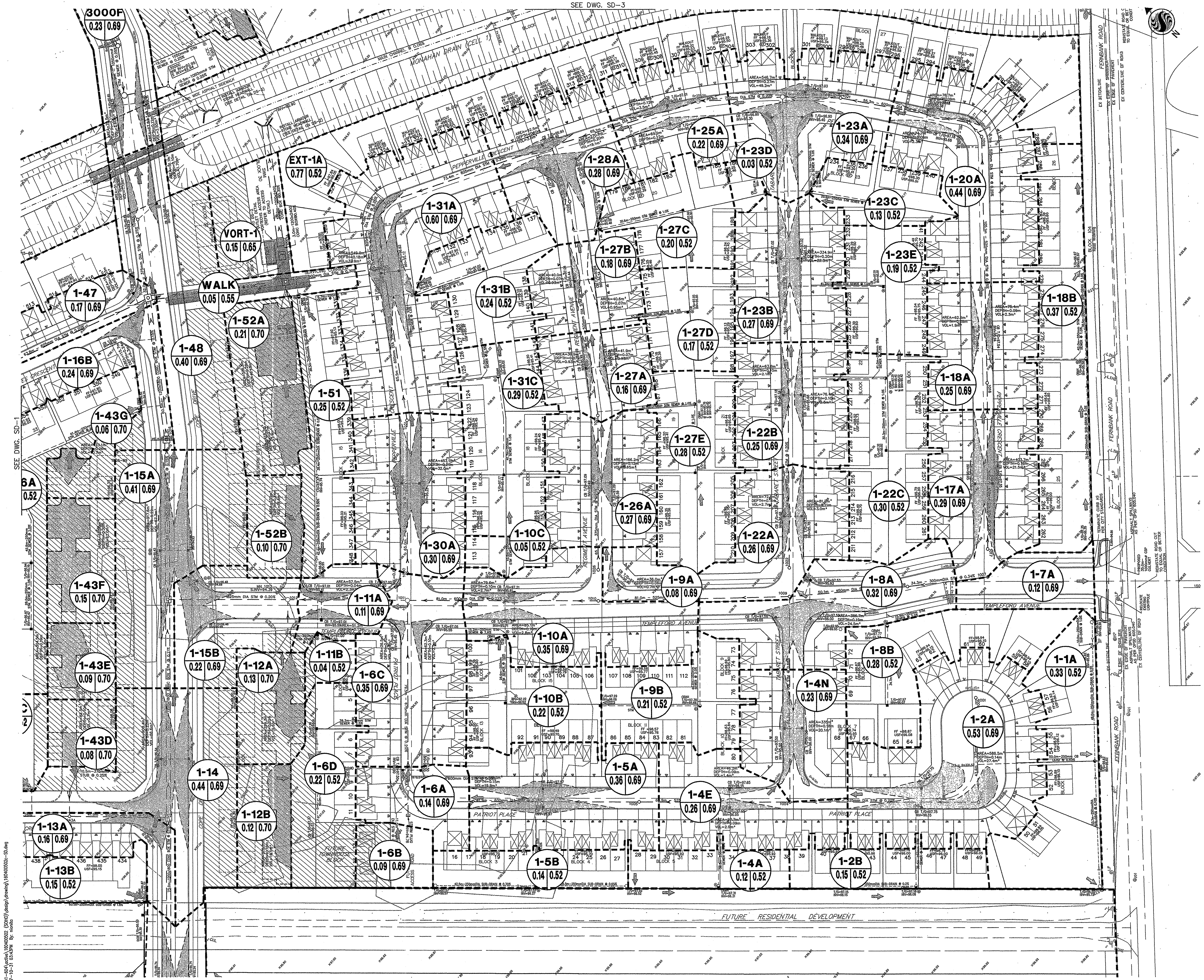
MAX PEAK FACTOR (RES.)=	4.0	AVG. DAILY FLOW / PERSON	280 l/p/day	MINIMUM VELOCITY	0.60 m/s
MIN PEAK FACTOR (RES.)=	2.0	COMMERCIAL	28,000 l/ha/day	MAXIMUM VELOCITY	3.00 m/s
PEAKING FACTOR (INDUSTRIAL):	2.4	INDUSTRIAL (HEAVY)	55,000 l/ha/day	MANNINGS n	0.013
PEAKING FACTOR (ICI >20%):	1.5	INDUSTRIAL (LIGHT)	35,000 l/ha/day	BEDDING CLASS	B
PERSONS / SINGLE	3.4	INSTITUTIONAL	28,000 l/ha/day	MINIMUM COVER	2.50 m
PERSONS / TOWNHOME	2.7	INFILTRATION	0.33 l/s/Ha	HARMON CORRECTION FACTOR	0.8
PERSONS / APARTMENT	1.8				

LOCATION			RESIDENTIAL AREA AND POPULATION									COMMERCIAL		INDUSTRIAL (L)		INDUSTRIAL (H)		INSTITUTIONAL		GREEN / UNUSED		C+I+I	INFILTRATION			TOTAL	PIPE							
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA	SINGLE	UNITS TOWN	APT	POP.	CUMULATIVE AREA	CUMULATIVE POP.	PEAK FACT.	PEAK FLOW	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	AREA	ACCU. AREA	PEAK FLOW	TOTAL AREA	ACCU. AREA	INFILT. FLOW	FLOW	LENGTH	DIA	MATERIAL	CLASS	SLOPE	CAP. (FULL)	CAP. V PEAK FLOW	VEL. (FULL)	VEL. (ACT.)
			(ha)					(ha)			(l/s)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(ha)	(l/s)	(ha)	(ha)	(l/s)	(l/s)	(m)	(mm)			(%)	(l/s)	(%)	(m/s)	(m/s)
R101A	110	147	0.05	0	2	0	6	0.05	6	3.75	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.05	0.05	0.02	0.09	46.5	200	PVC	SDR 35	1.18	36.3	**0.25%**	1.14	0.18
R208A	208	206	0.07	0	2	0	5	0.07	5	3.75	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.07	0.0	0.1	7.8	200	PVC	SDR 35	1.00	33.4	**0.27%**	1.05	0.20
R207A	207	206	0.07	0	6	0	17	0.07	17	3.71	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.07	0.0	0.2	17.1	200	PVC	SDR 35	1.00	33.4	**0.68%**	1.05	0.26
R206A	206	204	0.10	0	6	0	17	0.24	39	3.67	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.10	0.24	0.1	0.5	36.3	200	PVC	SDR 35	0.50	23.6	**2.32%**	0.74	0.26
R205A	205	204	0.06	0	4	0	11	0.06	11	3.73	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.06	0.0	0.2	17.2	200	PVC	SDR 35	1.00	33.4	**0.46%**	1.05	0.23
R204A	204	202	0.11	0	8	0	22	0.42	72	3.62	0.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.11	0.42	0.1	1.0	37.1	200	PVC	SDR 35	0.50	23.6	**4.18%**	0.74	0.31
R203A	203	202	0.05	0	2	0	5	0.05	5	3.75	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.05	0.05	0.0	0.1	16.8	200	PVC	SDR 35	1.00	33.4	**0.25%**	1.05	0.17
R202A	202	201	0.04	0	2	0	5	0.51	83	3.61	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.04	0.51	0.17	1.14	16.9	200	PVC	SDR 35	0.50	23.6	**4.83%**	0.74	0.32
			0.560		30																							200							
R133AA	133A	146	0.05	0	4	0	11	0.05	11	3.73	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.05	0.05	0.02	0.15	43.2	200	PVC	SDR 35	1.09	34.9	**0.43%**	1.10	0.24
R409A	409	408	0.06	0	5	0	14	0.06	14	3.72	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.06	0.0	0.2	17.9	200	PVC	SDR 35	1.00	33.4	**0.57%**	1.05	0.23
R410A	410	408	0.07	0	1	0	3	0.07	3	3.76	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.07	0.0	0.1	8.4	200	PVC	SDR 35	1.00	33.4	**0.18%**	1.05	0.17
R408A	408	406	0.08	0	5	0	14	0.22	31	3.68	0.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.08	0.22	0.1	0.4	33.4	200	PVC	SDR 35	0.50	23.6	**1.85%**	0.74	0.24
R407A	407	406	0.06	0	4	0	11	0.06	11	3.73	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.06	0.0	0.1	17.9	200	PVC	SDR 35	1.00	33.4	**0.45%**	1.05	0.23
R406A	406	404	0.11	0	8	0	22	0.40	63	3.63	0.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.11	0.40	0.1	0.9	34.4	200	PVC	SDR 35	0.50	23.6	**3.70%**	0.74	0.29
R405A	405	404	0.06	0	4	0	11	0.06	11	3.73	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.06	0.0	0.1	18.0	200	PVC	SDR 35	1.00	33.4	**0.45%**	1.05	0.23
R404A	404	403	0.10	0	6	0	17	0.55	91	3.60	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.10	0.55	0.2	1.2	31.1	200	PVC	SDR 35	0.50	23.6	**5.27%**	0.74	0.33
R403A	403	402	0.07	0	1	0	3	0.63	94	3.60	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.63	0.2	1.3	11.7	200	PVC	SDR 35	0.50	23.6	**5.52%**	0.74	0.33
R402A	402	401	0.06	0	2	0	6	0.68	100	3.59	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.68	0.23	1.39	25.5	200	PVC	SDR 35	0.50	23.6	**5.89%**	0.74	0.34
			0.68		36																							525							
R151A	151A	151	0.04	0	4	0	11	0.04	11	3.73	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.04	0.04	0.01	0.15	50.2	450	PVC	SDR 35	0.16	120.2	**0.12%**	0.73	0.09
R5A	5	4	0.19	0	10	0	27	0.19	27	3.69	0.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.19	0.19	0.1	0.4	30.0	200	PVC	SDR 35	0.65	27.0	**1.43%**	0.85	0.26
R4A	4	3	0.06	0	2	0	6	0.26	33	3.68	0.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.26	0.1	0.5	10.3	200	PVC	SDR 35	0.50	23.6	**2.02%**	0.74	0.24
R3A	3	2	0.03	0	0	0	0	0.29	33	3.68	0.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.03	0.29	0.1	0.5	21.1	200	PVC	SDR 35	0.50	23.6	**2.07%**	0.74	0.26
	2	1	0.00	0	0	0	0	0.29	33	3.68	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.29	0.10	0.49	6.4	200	PVC	SDR 35	0.50	23.6	**2.07%**	0.74	0.26
			0.29		12																							200							
R603A	603	602	0.11	0	6	0	16	0.11	16	3.71	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.11	0.11	0.0	0.2	19.9	200	PVC	SDR 35	1.00	33.4	**0.69%**	1.05	0.26
R604A	604	602	0.05	0	2	0	5	0.05	5	3.75	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.05	0.05	0.0	0.1	14.0	200	PVC	SDR 35	1.00	33.4	**0.25%**	1.05	0.17
	602	601	0.00	0	0	0	0	0.16	22	3.70	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.16	0.05	0.31	24.0	200	PVC	SDR 35	1.00	33.4	**0.93%**	1.05	0.28
			0.160		8																							525							

APPENDIX C

Appendix C Stormwater Management

C.1 2007 Subdivision Storm Design



Stantec

Stantec Consulting Ltd.
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Ottawa ON Canada
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Legend

- 3-9C / 0.26 | 0.65 — DRAINAGE AREA NO. / RUNOFF COEFFICIENT / STORM DRAINAGE AREA (ha)
- DRAINAGE AREA BOUNDARY
- PROPOSED STORM SEWER & MANHOLE
- PROPOSED CATCH BASIN (ALL ROAD CB'S TO INCLUDE PERFORATED STUB DRAINS EXTENDING OUT FROM THE CB IN TWO DIRECTIONS PARALLEL TO THE ROADWAY. THESE DRAINS ARE TO BE INSTALLED AT THE BOTTOM OF THE SUBBASE LAYER.)
- PROPOSED SUBDRAIN CATCH BASIN
- PROPOSED 250ø PERFORATED PIPE
- STREET CATCHBASINS TO BE INTERCONNECTED WITH ONLY ONE CONNECTION TO STORM SEWER PER PAIR WHERE NOTED.
- IPEX TYPE 'A' TO BE INSTALLED IN STREET AND REAR YARD CATCHBASINS WHERE NOTED.
- PROPOSED CATCH BASIN / MANHOLE c/w IPEX INLET-CONTROL DEVICE TYPE 'A' OR APPROVED EQUIVALENT
- PONDING AREA LIMITS
- DEPTH=0.20m — MAXIMUM PONDING DEPTH
- DIRECTION OF OVERLAND FLOW

Notes

1. IPEX TYPE 'A' TO RESTRICT FLOWS TO THE STORM SEWER TO 22L/s AT 1.8m HEAD.

3	REVISED AS PER CITY COMMENTS AND FINAL APPROVAL	KJK	JBL	07.10.29
2	REVISED AS PER CITY COMMENTS	KJK	JBL	07.08.17
1	ISSUED FOR CITY COMMENTS	KJK	JBL	07.07.12
Revision		By	Appd.	YY.MM.DD

File Name: 160400502C-SD	KJK	JBL	KJK	07.03.14
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
J. B. LACHANCE
PROVINCE OF ONTARIO

Client/Project

CAVANAGH CONSTRUCTION LTD.

SOHO - KANATA SOUTH

Ottawa ON Canada

Title

STORM DRAINAGE PLAN

Project No.	Scale	
160400502C	1:750 (0 7.5 22.5 37.5m)	
Drawing No.	Sheet	Revision
SD-2	51 of 58	3

V:\01-60\Active\160400502 (SENO)\design\drawing\160400502c-SD.dwg
2007-10-31 03:40PM By: nicola

ORIGINAL SHEET – ISO A1

Stantec Consulting Ltd.
1505 Laperriere Avenue
Ottawa ON Canada
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www.stantec.com

Stantec

Legend

- 3-9C / 0.26 | 0.65 — DRAINAGE AREA NO. / RUNOFF COEFFICIENT
- STORM DRAINAGE AREA (ha)
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1 ISSUED FOR CITY COMMENTS	KJK	JBL	07.07.12
File Name: 160400502C-SD	Dwn. KJK	Chkd. JBL	Dsgn. KJK	YY.MM.DD 07.03.14

Permit-Seal

Client/Project

CAVANAGH CONSTRUCTION LTD.

SOHO - KANATA SOUTH

Ottawa ON Canada

Title

STORM DRAINAGE PLAN

Project No.	Scale	Drawing No.	Sheet	Revision
160400502C	1:750 (0 7.5 22.5 37.5m)	SD-3	52 of 58	3

Stantec

Soho West Development

DATE: March 6, 2007
REVISION: October 25, 2007
DESIGNED BY: NPC
CHECKED BY: AMP

STORM SEWER DESIGN SHEET

(City of Ottawa)

Phase 1

FILE NUMBER: 1604-00502

DESIGN PARAMETERS

$I = a / (t+b)^c$

(As per City of Ottawa Guidelines, 2004)

	1:5 yr	1:10 yr
a =	998.07	1174.184
b =	6.053	6.014
c =	0.814	0.816

MANNING'S n = 0.013
MINIMUM COVER: 2.00 m
TIME OF ENTRY 15 min

LOCATION			DRAINAGE AREA							PIPE SELECTION																			
STREET / AREA ID	FROM M.H.	TO M.H.	AREA (ha)	C (-)	ACCUM. AREA (ha)	A x C (ha)	ACCUM. AxC (ha)	T of C (min)	I (mm/h)	Q_{ACT} (CIA/360) (L/s)	LENGTH (m)	PIPE SIZE (mm)	SLOPE %	Conduit Type	Pipe size Box/Elliptical (height)	Box Width	Q_{CAP} (FULL) (L/s)	Q_{ACT} / Q_{CAP} (-)	VEL. (FULL) (m/s)	VEL. (ACT) (m/s)	TIME OF FLOW (min)	us Ground Elevation (m)	us Obvert Elevation (m)	us Invert Elevation (m)	us pipe Cover (m)	ds Ground Elevation (m)	ds Obvert Elevation (m)	ds Invert Elevation (m)	d/s pipe Cover (m)
PATRIOT (1-1A)	1001	1002	0.33	0.52	0.33	0.17	0.17	15.00	83.56	39.8	43.4	375	0.25				91.5	0.44	0.80	0.76	0.95	98.17	95.70	95.33	2.47	97.85	95.59	95.22	2.26
PATRIOT (1-2A,1-2B)	1002	1004E	0.68	0.65	1.01	0.44	0.62	15.95	80.61	137.8	80.0	525	0.20				200.7	0.69	0.90	0.97	1.37	97.85	95.59	95.07	2.26	97.91	95.43	94.91	2.48
PATRIOT (1-4E,1-4A)	1004E	1005	0.38	0.64	1.39	0.24	0.86	17.32	76.75	182.7	63.9	525	0.25				224.3	0.81	1.00	1.12	0.95	97.91	95.43	94.91	2.48	97.89	95.27	94.75	2.62
PATRIOT (1-5A, 1-5B)	1005	1006	0.50	0.64	1.89	0.32	1.18	18.26	74.30	243.2	98.0	600	0.25				320.3	0.76	1.10	1.21	1.35	97.89	95.27	94.67	2.62	97.70	95.03	94.43	2.67
PATRIOT (1-6A, 1-6B, 1-6C, 1-6D)	1006	1011	0.80	0.64	2.69	0.51	1.69	19.61	71.11	334.4	84.7	675	0.20				392.2	0.85	1.06	1.20	1.18	97.70	95.03	94.35	2.67	97.35	94.86	94.18	2.49
								20.79																					
TABARET (1-4N)	1004N	1009	0.23	0.69	0.23	0.16	0.16	15.00	83.56	36.8	86.7	375	0.68				150.8	0.24	1.32	1.06	1.37	97.91	95.81	95.43	2.10	97.74	95.22	94.84	2.52
								16.37																					
TEMPLEFORD	1007	1008	0.01	0.69	0.01	0.01	0.01	15.00	83.56	1.6	34.3	300	0.34				58.8	0.03	0.81	0.32	1.77	98.02	95.46	95.16	2.56	97.95	95.34	95.04	2.61
TEMPLEFORD (1-8A, 1-8B)	1008	1009	0.59	0.61	0.60	0.36	0.37	16.77	78.24	79.6	50.1	450	0.25				148.7	0.54	0.91	0.91	0.91	97.95	95.34	94.89	2.61	97.74	95.22	94.77	2.52
								17.69																					
TEMPLEFORD (1-9A, 1-9B)	1009	1010	0.29	0.57	1.12	0.16	0.69	17.69	75.78	145.1	81.0	525	0.22				210.4	0.69	0.94	1.02	1.32	97.74	95.22	94.69	2.52	97.67	95.04	94.51	2.63
TEMPLEFORD (1-10A, 1-10B,1-10C)	1010	1011	0.62	0.62	1.74	0.38	1.07	19.01	72.51	215.8	81.0	600	0.22				300.5	0.72	1.03	1.12	1.20	97.67	95.04	94.44	2.63	97.35	94.86	94.26	2.49
								20.21																					
TEMPLEFORD (1-11A, 1-11B)	1011	1012	0.15	0.64	4.58	0.10	2.86	20.79	68.57	544.9	50.6	750	0.25				580.7	0.94	1.27	1.46	0.58	97.35	94.86	94.11	2.49	97.02	94.73	93.98	2.29
								21.36																					
TEMPLEFORD (1-12A)	1012B	1012A	0.12	0.70	0.12	0.08	0.08	15.00	83.56	19.5	46.0	300	0.35				59.7	0.33	0.82	0.72	1.06	97.48	95.13	94.83	2.35	97.49	94.97	94.67	2.52
TEMPLEFORD (1-12B)	1012A	1012	0.13	0.70	0.25	0.09	0.18	16.06	80.28	39.0	66.5	300	0.35				59.7	0.65	0.82	0.88	1.27	97.49	94.97	94.67	2.52	97.02	94.73	94.43	2.29
								17.33																					
TEMPLEFORD	1012	1015			4.83	0.00	3.04	21.36	67.39	568.3	50.7	825	0.20				669.7	0.85	1.21	1.37	0.62	97.02	94.73	93.91	2.29	96.77	94.63	93.81	2.14
								21.98																					
NORTHGRAVES	1033S	1034	0.01	0.69	0.01	0.01	0.01	15.00	83.56	1.6	12.9	300	0.34				58.8	0.03	0.81	0.32	0.67	97.63	95.61	95.31	2.02	97.48	95.56	95.26	1.92
NORTHGRAVES (1-34A, 1-34B, 1-34C)	1034	1035N	0.73	0.65	0.74	0.47	0.48	15.67	81.46	108.2	105.2	450	0.30				162.9	0.66	0.99	1.07	1.64	97.48	95.56	95.11	1.92	97.20	95.25	94.80	1.95
HENBURY	1035N	1036			0.74	0.00	0.48	17.31	76.77	102.0	58.3	450	0.20				133.0	0.77	0.81	0.90	1.08	97.20	95.25	94.80	1.95	97.34	95.13	94.68	2.21
HENBURY (1-36A, 1-36B)	1036	1039	0.54	0.59	1.28	0.32	0.80	18.39	73.99	164.1	45.0	525	0.16				179.5	0.91	0.80	0.92	0.82	97.34	95.13	94.61	2.21	97.26	95.06	94.54	2.20
								19.21																					
NORTHGRAVES	1033N	1037	0.01	0.69	0.01	0.01	0.01	15.00	83.56	1.6	28.1	300	0.34				58.8	0.03	0.81	0.32	1.45	97.63	95.53	95.23	2.10	97.67	95.43	95.13	2.24
NORTHGRAVES	1037	1038			0.01	0.00	0.01	16.45	79.14	1.5	33.8	300	0.34				58.8	0.03	0.81	0.32	1.75	97.67	95.43	95.13	2.24	97.40	95.32	95.02	2.08
NORTHGRAVES (1-38A, 1-38B)	1038	1039	0.43	0.69	0.44	0.30	0.30	18.20	74.47	62.8	86.0	375	0.30				100.2	0.63	0.88	0.93	1.54	97.40	95.32	94.94	2.08	97.29	95.06	94.69	2.23
								19.74																					
NORTHGRAVES (1-39)	1039	1042	0.27	0.69	1.99	0.19	1.29	19.74	70.83	253.4	85.7	600	0.25				320.3	0.79	1.10	1.22	1.17	97.29	95.06	94.46	2.23	97.19	94.85	94.25	2.34
								20.91																					
ALSON MILLS (1-40)	1040	1041	0.24	0.69	0.24	0.17	0.17	15.00	83.56	38.4	79.9	375	0.25				91.5	0.42	0.80	0.76	1.75	97.15	95.13	94.76	2.02	97.14	94.93	94.56	2.21
ALSON MILLS (1-41A, 1-41B)	1041	1042	0.48	0.55	0.72	0.26	0.43	16.75	78.31	93.6	44.0	450	0.20				133.0	0.70	0.81	0.88	0.83	97.14	94.93	94.48	2.21	97.19	94.85	94.40	2.34
								17.58																					
NORTHGRAVES	1042	1046			2.71	0.00	1.72	20.91	68.32	326.2	79.8	750	0.20				519.4	0.63	1.14	1.21	1.10	97.19	94.85	94.10	2.34	96.70	94.69	93.94	2.01
								22.01																					
WHITEFORD (1-44)	1044	1045	0.29	0.69	0.29	0.20	0.20	15.00	83.56	46.4	101.1	375	0.25				91.5	0.51	0.80	0.80	2.10	97.02	95.03	94.65	1.99	97.00	94.78	94.40	2.22
WHITEFORD (1-45A, 1-45B)	1045	1046	0.72	0.60	1.01	0.43	0.63	17.10	77.33	135.5	56.7	525	0.16				179.5	0.75	0.80	0.89	1.06	97.00	94.78	94.25	2.22	96.70	94.69	94.16	2.01
								18.17																					
NORTHGRAVES (1-46)	1046	1047	0.24	0.69	3.96	0.17	2.51	22.01	66.13	462.0	60.0	825	0.20				669.7	0.69	1.21	1.32	0.76	96.70	94.69	93.86	2.01	96.63	94.57	93.74	2.06
NORTHGRAVES (1-47)	1047	1048	0.17	0.69	4.13	0.12	2.63	22.77	64.71	473.1	63.8	825	0.20				669.7	0.71	1.21	1.32	0.80	96.63	94.57	93.74	2.06	96.50	94.44	93.61	2.06
								23.57																					
Parking Lot (1-43G)	CB-1043G	1043F	0.06	0.70	0.06	0.04	0.04	15.00	83.56	9.7	41.5	250	0.45				41.6	0.23	0.82	0.64	1.08	96.92	95.39	95.14	1.53	96.86	95.21	94.96	1.65
Parking Lot (1-43F)	1043F	1043E	0.15	0.70	0.21	0.11	0.15	16.08	80.22	32.8	45.3	300	0.35				59.7	0.55	0.82	0.83	0.90	96.86	95.21	94.91	1.65	97.00	95.05	94.75	1.95
Parking Lot (1-43E)	1043E	1043D	0.09	0.70	0.30	0.06	0.21	16.98	77.65	45.3	39.9	300	0.35				59.7	0.76	0.82	0.90	0.74	97.00	95.05	94.75	1.95	97.03	94.91	94.61	2.12
Parking Lot (1-43D)	1043D	1043A	0.08	0.70	0.38	0.06	0.27	17.72	75.69	55.9	27.8	375	0.25				91.5	0.61	0.80	0.84	0.55	97.03	94.91	94.53	2.12	96.90	94.84	94.46	2.06
								18.27																					
NORTHGRAVES (1-35A,1-35B)	1035E	1053	0.32	0.63	0.32	0.20	0.20	15.00	83.56	46.9	78.0	375	0.25				91.5	0.51	0.80	0.80	1.62	97.20	95.37	94.99	1.83	97.22	95.17	94.80	2.05
NORTHGRAVES (1-53A,1-53B,1-53C,1-53D)	1053	1043	0.73	0.61	1.05	0.45	0.65	16.62	78.66	141.6	78.0	450	0.25				148.7	0.95	0.91	1.05	1.24	97.22	95.17	94.72	2.05	97.07	94.98	94.53	2.09
NORTHGRAVES (1-43A, 1-43B, 1-43C)	1043	1043A	0.31	0.59	1.36	0.18	0.83	17.86	75.32	173.5	55.4	525	0.25				224.3	0.77	1.00	1.11	0.83	97.07	94.98	94.45	2.09	96.90	94.84	94.31	2.06
								18.69																					
NORTHGRAVES	1043A	1014			1.74	0.00	1.10	18.69	73.26	222.9	41.9	600	0.25				320.3	0.70	1.10	1.19	0.59	96.90	94.84	94.24	2.06	96.82	94.73	94.13	2.09
								19.28																					
COPE DRIVE (COPE-13B)	1013B	1013A	0.22	0.70	0.22	0.15	0.15	15.00	83.56	35.7	35.9	300	0.40				63.8	0.56	0.87	0.90	0.66	97.20	95.16	94.86	2.04	97.10	95.02	94.72	2.08
COPE DRIVE (COPE-13A)	1013A	1013	0.22	0.70	0.44	0.15	0.31	15.66	81.47	69.7	50.6	375	0.40				115.7	0.60	1.01	1.07	0.79	97.10	95.02	94.64	2.08	96.91	94.81	94.44	2.10
COPE (FUT-13A, FUT-13B, 1-13A, 1-13B)	1013	1014	12.30	0.63	12.74	7.73	8.04	16.46	79.13	1766.9	73.0	1500	0.11	BOX	1200	1800	2445.9	0.72	1.34	1.47	0.82	96.91	94.81	93.61	2.10	96.82	94.73	93.53	2.09
								17.28																					
COPE (1-14)	1014	1015	0.44	0.69	14.92	0.30	9.44	19.28	71.88	1884.3	92.1	1500	0.11	BOX	1200	1800	2445.9	0.77	1.34	1.49	1.03	96.82	94.73	93.53	2.09	96.77	94.63	93.43	2.14
								20.31																					
COPE (1-15A, 1-15B)	1015	1016	0.63	0.69	20.38	0.43	12.91	21.98	66.18	2373.1	68.1	1500	0.15	BOX	1200	1800	2856.2	0.83	1.57	1.76	0.64	96.77	94.63	93.43	2.14	96.82	94.53	93.33	2.29
COPE (1-16A, 1-16B)	1016	1048	0.68	0.58	21.06	0.39	13.30	22.62	64.97	2400.8	60.5	1500	0.15	BOX	1200	1800	2856.2	0.84	1.57	1.77	0.57	96.82	94.53	93.33	2.29	96.50	94.44	93.24	2.06
								23.19																					

Stantec

Soho West Development

DATE: March 6, 2007
REVISION: October 25, 2007
DESIGNED BY: NPC
CHECKED BY: AMP

STORM SEWER DESIGN SHEET

(City of Ottawa)

Phase 1

FILE NUMBER: 1604-00502

DESIGN PARAMETERS

$I = a / (t+b)^c$

(As per City of Ottawa Guidelines, 2004)

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MANNING'S n = 0.013
MINIMUM COVER: 2.00 m
TIME OF ENTRY 15 min

LOCATION			DRAINAGE AREA							PIPE SELECTION																				
STREET / AREA ID	FROM M.H.	TO M.H.	AREA	C	ACCUM. AREA	A x C	ACCUM. AxC	T of C	I	Q_{ACT} (CIA/360)	LENGTH	PIPE SIZE	SLOPE	Conduit Type	Pipe size Box/Elliptical (height)	Box Width	Q_{CAP} (FULL)	Q_{ACT} / Q_{CAP}	VEL. (FULL)	VEL. (ACT)	TIME OF FLOW	us Ground Elevation	us Obvert Elevation	us Invert Elevation	us pipe Cover	ds Ground Elevation	ds Obvert Elevation	ds Invert Elevation	d/s pipe Cover
			(ha)	(-)	(ha)	(ha)	(ha)	(min)	(mm/h)	(L/s)	(m)	(mm)	%				(L/s)	(-)	(m/s)	(m/s)	(min)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
COPE (1-48)	1048A	1048	0.40	0.69	0.40	0.28	0.28	15.00	83.56	64.1	32.0	375	0.25				91.5	0.70	0.80	0.87	0.61	96.15	94.52	94.14	1.63	96.50	94.44	94.06	2.06
								15.61																					
WALKWAY FROM COPE (walkway)	1048	1052	0.05	0.55	25.64	0.03	16.24	23.57	63.28	2854.2	52.8	1500	0.20	BOX	1200	1800	3298.1	0.87	1.81	2.05	0.43	96.50	94.44	93.24	2.06	97.04	94.33	93.13	2.71
								24.00																					
PEPPERVILLE (1-30A)	1030	1031	0.30	0.69	0.30	0.21	0.21	15.00	83.56	48.0	65.0	375	0.25				91.5	0.53	0.80	0.81	1.34	97.16	94.77	94.39	2.39	97.04	94.61	94.23	2.43
PEPPERVILLE (1-31A, 1-31B, 1-31C)	1031	1051	1.18	0.61	1.48	0.72	0.92	16.34	79.47	203.7	65.5	600	0.20				286.5	0.71	0.98	1.07	1.02	97.04	94.61	94.01	2.43	96.75	94.48	93.88	2.27
								17.36																					
PEPPERVILLE (1-17A)	1017	1018	0.29	0.69	0.29	0.20	0.20	15.00	83.56	46.4	70.8	450	0.30				162.9	0.29	0.99	0.84	1.40	97.86	95.59	95.14	2.27	97.78	95.38	94.93	2.40
PEPPERVILLE (1-18A, 1-18B)	1018	1019	0.62	0.59	0.91	0.36	0.57	16.40	79.29	124.4	105.1	525	0.25				224.3	0.55	1.00	1.02	1.71	97.78	95.38	94.85	2.40	97.44	95.12	94.59	2.32
PEPPERVILLE	1019	1020			0.91	0.00	0.57	18.11	74.69	117.2	8.1	525	0.25				224.3	0.52	1.00	1.01	0.13	97.44	95.12	94.59	2.32	97.40	95.09	94.57	2.31
PEPPERVILLE (1-20A)	1020	1021	0.44	0.69	1.35	0.30	0.87	18.24	74.36	179.4	55.3	600	0.20				286.5	0.63	0.98	1.04	0.89	97.40	95.09	94.49	2.31	97.25	94.98	94.38	2.27
PEPPERVILLE	1021	1024			1.35	0.00	0.87	19.13	72.22	174.3	24.6	600	0.20				286.5	0.61	0.98	1.03	0.40	97.25	94.98	94.38	2.27	97.19	94.93	94.33	2.26
								19.53																					
TABARET (1-22A, 1-22B, 1-22C)	1022	1023	0.81	0.63	0.81	0.51	0.51	15.00	83.56	117.9	84.4	450	0.20				133.0	0.89	0.81	0.92	1.52	97.53	95.34	94.89	2.19	97.34	95.17	94.72	2.17
TABARET (1-23A, 1-23B, 1-23C, 1-23D, 1-23E)	1023	1024	0.96	0.62	1.77	0.59	1.10	16.52	78.94	241.3	116.0	600	0.20				286.5	0.84	0.98	1.11	1.74	97.34	95.17	94.57	2.17	97.19	94.93	94.33	2.26
								18.27																					
PEPPERVILLE	1024	1025			3.12	0.00	1.97	19.53	71.31	390.0	35.8	750	0.20				519.4	0.75	1.14	1.26	0.47	97.19	94.93	94.18	2.26	97.17	94.86	94.11	2.31
PEPPERVILLE (1-25A)	1025	1029	0.22	0.69	3.34	0.15	2.12	20.00	70.25	413.8	65.1	825	0.20				669.7	0.62	1.21	1.27	0.85	97.17	94.86	94.04	2.31	96.95	94.73	93.91	2.22
								20.85																					
REGIMENT (1-26A)	1026	1027	0.27	0.69	0.27	0.19	0.19	15.00	83.56	43.2	65.7	375	0.25				91.5	0.47	0.80	0.79	1.39	97.55	95.13	94.76	2.42	97.31	94.97	94.59	2.34
REGIMENT (1-27A, 1-27B, 1-27C, 1-27D, 1-27E)	1027	1028	0.99	0.58	1.26	0.58	0.76	16.39	79.31	168.3	91.5	525	0.20				200.7	0.84	0.90	1.01	1.51	97.31	94.97	94.44	2.34	97.09	94.78	94.26	2.31
REGIMENT (1-28A)	1028	1029	0.28	0.69	1.54	0.19	0.96	17.90	75.22	200.0	25.4	600	0.20				286.5	0.70	0.98	1.06	0.40	97.09	94.78	94.18	2.31	96.95	94.73	94.13	2.22
								18.30																					
PEPPERVILLE	1029	1049			4.88	0.00	3.08	20.85	68.43	585.1	73.4	825	0.25				748.8	0.78	1.36	1.51	0.81	96.95	94.73	93.91	2.22	96.86	94.55	93.72	2.31
PEPPERVILLE	1049	1050			4.88	0.00	3.08	21.66	66.81	571.2	8.5	825	0.25				748.8	0.76	1.36	1.51	0.09	96.86	94.55	93.72	2.31	96.83	94.53	93.70	2.30
PEPPERVILLE	1050	1051			4.88	0.00	3.08	21.75	66.62	569.6	20.9	825	0.25				748.8	0.76	1.36	1.51	0.23	96.83	94.53	93.70	2.30	96.75	94.48	93.65	2.27
								21.99																					
WALKWAY (1-51)	1051	1052	0.25	0.52	6.61	0.13	4.13	21.99	66.17	759.3	47.7	900	0.30				1034.5	0.73	1.58	1.73	0.46	96.75	94.48	93.58	2.27	97.04	94.33	93.43	2.71
								22.44																					
Parking Lot (1-52B)	1052B	1052A	0.10	0.70	0.10	0.07	0.07	15.00	83.56	16.2	50.0	375	0.35				108.2	0.15	0.95	0.65	1.27	97.34	94.75	94.38	2.59	97.15	94.58	94.20	2.57
Parking Lot (1-52A)	1052A	1052	0.21	0.70	0.31	0.15	0.22	16.27	79.66	48.0	69.5	375	0.35				108.2	0.44	0.95	0.92	1.26	97.15	94.58	94.20	2.57	97.04	94.33	93.96	2.71
								17.54																					
ACCESS ROAD	1052	1053			32.56	0.00	20.59	24.00	62.54	3576.4	10.3	1500	0.35	Box	1200	2400	4363.0	0.82	2.39	2.68	0.06	97.04	94.33	93.13	2.71	96.65	94.30	93.10	2.35
ACCESS ROAD	1053	1053A			32.56	0.00	20.59	24.06	62.43	3570.2	3.0	1500	0.40	Box	1200	2400	4664.2	0.77	2.56	2.84	0.02	96.65	94.29	93.09	2.36	97.04	94.28	93.08	2.77
ACCESS ROAD	1053A	outlet			32.56	0.00	20.59	24.13	62.33	3564.0	50.0	1500	0.35	Box	1200	2400	4363.0	0.82	2.39	2.68	0.31	97.04	94.28	93.08	2.77	97.04	94.10	92.90	2.94
								24.44																					
																						Boundary Condition:	**92.90**						
* Future Van Gahl Lands	12.39	ha																											
		Check	32.56		32.56	20.59	20.59																						
invert at drain	92.9																												

Stantec

Soho West Development

DATE: March 6, 2007
REVISION: June 26, 2007
DESIGNED BY: kjk
CHECKED BY: AMP

STORM SEWER DESIGN SHEET

(City of Ottawa)

Phase 2

FILE NUMBER: 1604-00502

DESIGN PARAMETERS

$I = a / (t+b)^c$ (As per City of Ottawa Guidelines, 2004)

	1:5 yr	1:10 yr
a =	998.07	1174.184
b =	6.053	6.014
c =	0.814	0.816

MANNING'S n = 0.013
MINIMUM COVER: 2.00 m
TIME OF ENTRY 15 min

LOCATION			DRAINAGE AREA							PIPE SELECTION								Upstream			Downstream			
STREET / AREA ID	FROM M.H.	TO M.H.	AREA (ha)	C (-)	ACCUM. AREA (ha)	A x C (ha)	ACCUM. AxC (ha)	T of C (min)	I (mm/h)	Q_{ACT} (CIA/360) (L/s)	LENGTH (m)	PIPE SIZE (mm)	SLOPE %	Q_{CAP} (FULL) (L/s)	Q_{ACT} / Q_{CAP} (-)	VEL. (FULL) (m/s)	VEL. (ACT) (m/s)	TIME OF FLOW (min)	Obvert Elevation (m)	Invert Elevation (m)	us pipe Cover (m)	Ground Elevation (m)	Obvert Elevation (m)	Invert Elevation (m)	d/s pipe Cover (m)
PARKING LOT (2-0A)	2000A	2000B	0.15	0.70	0.15	0.11	0.11	15.00	83.56	24.4	57.4	300	0.40	63.8	0.38	0.87	0.81	1.18	95.09	94.79	1.68	96.77	94.86	94.56	2.15
PARKING LOT	2000B	2000			0.00	0.00	0.11	16.18	79.92	23.3	21.0	300	0.40	63.8	0.37	0.87	0.80	0.44	94.86	94.56	1.15	96.01	94.78	94.48	2.23
CARRONBRIDGE (2-0B)	2000	2001	0.14	0.68	0.29	0.10	0.20	16.62	78.66	43.7	42.0	450	0.20	133.0	0.33	0.81	0.72	0.98	94.78	94.33	2.23	97.01	94.69	94.24	3.00
CARRONBRIDGE (2-1A)	2001	2002	0.18	0.68	0.47	0.12	0.32	17.60	76.00	68.1	49.3	450	0.20	133.0	0.51	0.81	0.81	1.01	94.69	94.24	3.00	97.69	94.60	94.15	3.02
CARRONBRIDGE	2002	2003			0.47	0.00	0.32	18.61	73.45	65.8	10.6	450	0.30	162.9	0.40	0.99	0.93	0.19	94.60	94.15	3.02	97.62	94.56	94.11	3.06
CARRONBRIDGE	2003	2004			0.47	0.00	0.32	18.80	72.99	65.4	36.3	450	0.45	199.5	0.33	1.22	1.08	0.56	94.56	94.11	3.06	97.62	94.40	93.95	3.04
CARRONBRIDGE (2-4A)	2004	2005	0.32	0.68	0.79	0.22	0.54	19.36	71.68	107.6	39.6	525	0.35	265.4	0.41	1.19	1.12	0.59	94.40	93.88	3.04	97.44	94.26	93.74	3.14
CARRONBRIDGE (2-5A)	2005	2008	0.21	0.68	1.00	0.14	0.68	19.96	70.35	133.5	29.1	525	0.35	265.4	0.50	1.19	1.19	0.41	94.26	93.74	3.14	97.40	94.16	93.63	3.13
								20.36																	
CARRONBRIDGE (2-6A)	2006W	2007	0.35	0.68	0.35	0.24	0.24	15.00	83.56	55.2	54.2	300	0.50	71.3	0.77	0.98	1.09	0.83	94.72	94.42	2.78	97.50	94.45	94.15	2.90
CARRONBRIDGE (2-7A, 2-7B)	2007	2008	0.44	0.36	0.79	0.16	0.40	15.83	80.96	89.1	57.5	375	0.50	129.3	0.69	1.13	1.23	0.78	94.45	94.07	2.90	97.35	94.16	93.78	3.13
								16.61																	
CARRONBRIDGE (2-8A)	2008	2009	0.25	0.68	2.04	0.17	1.25	20.36	69.46	241.1	53.6	600	0.33	368.0	0.66	1.26	1.35	0.66	94.16	93.56	3.13	97.29	93.98	93.38	3.12
CARRONBRIDGE (2-9A)	2009	2019	0.14	0.68	2.18	0.10	1.34	21.03	68.08	254.3	35.6	675	0.32	496.1	0.51	1.34	1.34	0.44	93.98	93.31	3.12	97.10	93.87	93.19	3.18
CARRONBRIDGE	2019	2018	0.16	0.68	2.34	0.11	1.45	21.47	67.18	271.2	28.3	675	0.32	496.1	0.55	1.34	1.37	0.34	93.87	93.19		97.05	93.78	93.10	1.92
								21.81																	
CARRONBRIDGE	2006E	2010	0.02	0.68	0.02	0.01	0.01	15.00	83.56	3.2	10.9	300	0.40	63.8	0.05	0.87	0.41	0.44	94.67	94.37	2.83	97.50	94.63	94.33	2.87
CARRONBRIDGE (2-10A, 2-10B)	2010	2013	0.53	0.42	0.55	0.22	0.23	15.44	82.16	53.5	70.2	375	0.83	166.6	0.32	1.46	1.29	0.90	94.63	94.25	2.87	97.50	94.05	93.67	3.24
								16.35																	
CARRONBRIDGE	2011N	2012	0.01	0.69	0.01	0.01	0.01	15.00	83.56	1.6	7.5	300	0.50	71.3	0.02	0.98	0.39	0.32	94.62	94.32	2.88	97.50	94.59	94.29	2.96
CARRONBRIDGE	2012	2013	0.01	0.69	0.02	0.01	0.01	15.32	82.54	3.2	58.8	300	0.92	96.8	0.03	1.33	0.53	1.85	94.59	94.29	2.96	97.55	94.05	93.75	3.24
								17.17																	
CARRONBRIDGE (2-11A, 2-11B)	2011S	2014	0.57	0.59	0.57	0.34	0.34	15.00	83.56	78.3	75.3	300	0.80	90.2	0.87	1.24	1.40	0.89	94.66	94.36	2.84	97.50	94.05	93.75	3.33
CARRONBRIDGE	2014	2015			0.57	0.00	0.34	15.89	80.78	75.7	14.5	375	0.30	100.2	0.76	0.88	0.97	0.25	94.05	93.68	3.33	97.38	94.01	93.63	3.29
CARRONBRIDGE (2-15A)	2015	2016	0.27	0.69	0.84	0.19	0.52	16.14	80.04	116.4	36.8	450	0.30	162.9	0.71	0.99	1.08	0.57	94.01	93.56	3.29	97.30	93.90	93.45	3.40
CARRONBRIDGE	2016	2018			0.84	0.00	0.52	16.71	78.41	114.1	34.5	450	0.35	176.0	0.65	1.07	1.15	0.50	93.90	93.45	3.40	97.30	93.78	93.33	1.92
								17.21																	
WESTHALL (2-13A, 2-13B, 2-13C 2-10C)	2013	2017	0.96	0.58	1.53	0.55	0.80	17.17	77.15	171.8	57.8	525	0.25	224.3	0.77	1.00	1.11	0.86	94.05	93.52	3.24	97.29	93.90	93.38	3.00
WESTHALL (2-17A, 2-17B)	2017	2018	0.42	0.51	1.95	0.22	1.02	18.03	74.89	211.6	49.0	600	0.25	320.3	0.66	1.10	1.18	0.69	93.90	93.30	3.00	96.90	93.78	93.18	1.92
								18.72																	
OUTLET	2018	2019			5.13	0.00	2.99	21.81	66.51	553.2	18.0	900	0.50	1335.5	0.41	2.03	1.91	0.16	93.78	92.88	1.92	95.70	93.69	92.79	2.01
OUTLET	2019	2019B			5.13	0.00	2.99	21.97	66.20	550.6	2.0	900	0.40	1194.5	0.46	1.82	1.78	0.02	93.69	92.79	2.01	95.70	93.68	92.78	2.02
OUTLET	2019B	outlet			5.13	0.00	2.99	21.97	66.20	550.6	30.2	900	0.10	597.2	0.92	0.91	1.05	0.48	93.68	92.78	2.02	95.70	93.65	**92.75**	2.05
								22.45																	
invert at drain	**92.75**		5.13		5.13	2.99	2.99																		
Future Development																									

hydraulic grade line (HGL) in the subdivision. The 100 year HGL elevation in Cell 1 of the Monahan Drain was obtained through conversations with Novatech Engineering staff (see **Appendix F** for correspondence). Previous reports for the Monahan Drain Constructed Wetland estimated the 100 year water level in Cell 1 to be approximately 94.94 m. However, a set of twin culverts has been proposed to cross Fernbank Road, as well as Cope Drive, which will decrease the water level in Cell 1 to 94.55 m. In addition, the latest revision to the Monahan Drain Constructed Wetlands EPA SWMM model by Novatech Engineering resulted in a lower 100 year water elevation in Cell 1 equal to 94.38 m. **Appendix C** presents the proposed storm sewer design sheets.

The detailed DDSWMM hydrology was interfaced with the XP-SWMM models to determine the resulting HGL in the subdivision. The configuration and number of ICDs were iterated between DDSWMM and XP-SWMM to meet the HGL requirements for the 100 year storm. **Table 4.3** and **Table 4.4** summarize the HGL modeling results.

Table 4.3: Phase 1 - 100 Year Hydraulic Grade Line Results

Node (CB/MH)	Ground Elevation (m)	Lowest Underside of Footing (m)	Worst-case HGL (m)	Separation (m)
1001	98.17	96.05	95.45	0.60
1002	97.85	95.88	95.29	0.59
1004E	97.91	95.78	95.18	0.60
1004N	97.91	95.84	95.53	0.31
1005	97.89	95.65	94.98	0.67
1006	97.70	95.39	94.76	0.63
1007	98.02	N/A	95.16	-
1008	97.95	N/A	95.11	-
1009	97.74	95.84	94.99	0.85
1010	97.67	N/A	94.78	-
1011	97.35	95.39	94.61	0.78
1012	97.02	95.23	94.61	0.62
1012A	97.49	95.23	94.87	0.37
1012B	97.48	95.36	94.96	0.40
1013	97.99	N/A	94.63	-
1014	96.82	95.15	94.62	0.53
1015	97.49	N/A	94.61	-
1016	96.70	N/A	94.58	-
1017	97.86	95.85	95.26	0.59
1018	97.78	95.60	95.05	0.55
1019	97.44	95.67	94.78	0.89
1020	97.40	95.41	94.76	0.65
1021	97.25	95.34	94.71	0.63
1022	97.53	95.65	95.12	0.53
1023	97.34	95.29	94.92	0.37
1024	97.19	95.34	94.70	0.64
1025	97.17	95.22	94.67	0.55
1026	97.55	95.41	94.89	0.52
1027	97.31	95.31	94.78	0.53
1028	97.09	95.31	94.67	0.64
1029	96.95	95.22	94.65	0.57
1030	98.00	95.15	94.59	0.56
1031	98.00	95.07	94.57	0.50

Node (CB/MH)	Ground Elevation (m)	Lowest Underside of Footing (m)	Worst-case HGL (m)	Separation (m)
1033N	97.50	95.73	95.23	0.50
1033S	97.50	95.90	95.32	0.58
1034	97.43	95.80	95.32	0.48
1035E	97.20	95.55	95.19	0.36
1035N	97.20	95.45	95.03	0.42
1036	97.34	95.30	94.89	0.41
1037	97.50	95.73	95.13	0.60
1038	97.33	95.47	95.13	0.34
1039	97.26	95.26	94.80	0.47
1040	97.15	95.35	94.89	0.46
1041	97.14	95.28	94.72	0.56
1042	97.19	95.14	94.64	0.50
1043	97.07	95.23	94.83	0.40
1043A	96.90	95.15	94.68	0.47
1043D	97.03	95.29	94.74	0.55
1043E	97.00	95.29	94.92	0.37
1043F	96.86	95.35	95.05	0.30
1044	97.02	95.16	94.78	0.38
1045	97.00	95.09	94.62	0.47
1046	96.70	94.95	94.61	0.34
1047	96.63	94.90	94.58	0.32
1048	96.50	94.87	94.55	0.32
1048A	96.15	94.87	94.57	0.30
1049	96.86	95.05	94.59	0.47
1050	96.83	95.02	94.58	0.44
1051	96.75	95.02	94.56	0.46
1052	97.04	94.90	94.50	0.40
1052A	97.15	95.10	94.54	0.56
1052B	97.34	95.21	94.55	0.66
1053	97.22	N/A	95.05	-
1053B	97.20	N/A	94.41	-
CB-1043G	96.92	95.54	95.24	0.30
DIVERSION	95.65	N/A	94.50	-
Monahan	95.05	N/A	94.38	-

Table 4.4: Phase 2 - 100 Year Hydraulic Grade Line Results

Node (CB/MH)	Ground Elevation (m)	Lowest Underside of Footing (m)	Worst-case HGL (m)	Separation (m)
2000	97.01	95.42	94.78	0.64
2000A	96.77	95.42	94.99	0.44
2001	97.69	95.39	94.77	0.63
2002	97.62	95.39	94.73	0.67
2003	97.62	95.21	94.72	0.49
2004	97.44	95.21	94.69	0.52
2005	97.40	95.33	94.65	0.68
2006E	97.50	95.36	94.73	0.63
2006W	97.50	95.32	94.73	0.59
2007	97.35	95.22	94.70	0.52
2008	97.29	95.20	94.62	0.58
2009	97.10	95.12	94.54	0.58

Node (CB/MH)	Ground Elevation (m)	Lowest Underside of Footing (m)	Worst-case HGL (m)	Separation (m)
2010	97.50	95.36	94.73	0.63
2011N	97.50	95.58	94.64	0.94
2011S	97.50	95.39	94.70	0.69
2012	97.55	95.58	94.64	0.94
2013	97.29	95.26	94.63	0.63
2014	97.38	95.25	94.55	0.70
2015	97.30	95.12	94.54	0.58
2016	97.30	95.08	94.51	0.58
2017	96.90	95.10	94.56	0.54
2018	96.90	95.00	94.47	0.53
2019	97.05	95.00	94.50	0.50
2020	96.90	N/A	94.41	-
2020B	96.90	N/A	94.41	-
BYPASS	96.85	N/A	94.45	-
Monahan2	96.85	N/A	94.38	-

As is demonstrated in **Tables 4.3 and 4.4**, the worst-case scenario results in HGL elevations that remain at least 0.30 m below the proposed underside of footings (USFs) in all locations. **Appendix B** summarizes the results of the hydraulic modeling and output files for the subject site area.

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1001		1002		1004/1004E		1005		1006		1008		1009	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0	0:20	0.001	0:20	0.002	0:20	0.001	0:20	0.004	0:20	0.001	0:20	0.001
0:30	0.001	0:30	0.005	0:30	0.006	0:30	0.004	0:30	0.015	0:30	0.006	0:30	0.004
0:40	0.002	0:40	0.011	0:40	0.014	0:40	0.009	0:40	0.034	0:40	0.011	0:40	0.008
0:50	0.017	0:50	0.022	0:50	0.033	0:50	0.024	0:50	0.095	0:50	0.044	0:50	0.044
1:00	0.022	1:00	0.044	1:00	0.044	1:00	0.044	1:00	0.11	1:00	0.066	1:00	0.043
1:10	0.022	1:10	0.044	1:10	0.042	1:10	0.044	1:10	0.095	1:10	0.066	1:10	0.03
1:20	0.022	1:20	0.039	1:20	0.024	1:20	0.034	1:20	0.063	1:20	0.065	1:20	0.016
1:30	0.022	1:30	0.033	1:30	0.016	1:30	0.026	1:30	0.034	1:30	0.053	1:30	0.012
1:40	0.012	1:40	0.025	1:40	0.01	1:40	0.019	1:40	0.019	1:40	0.027	1:40	0.006
1:50	0.008	1:50	0.022	1:50	0.008	1:50	0.015	1:50	0.017	1:50	0.018	1:50	0.006
2:00	0.005	2:00	0.017	2:00	0.006	2:00	0.011	2:00	0.012	2:00	0.011	2:00	0.003
2:10	0.004	2:10	0.014	2:10	0.005	2:10	0.009	2:10	0.011	2:10	0.009	2:10	0.003
2:20	0.003	2:20	0.012	2:20	0.005	2:20	0.008	2:20	0.01	2:20	0.007	2:20	0.003
2:30	0.003	2:30	0.011	2:30	0.004	2:30	0.007	2:30	0.009	2:30	0.007	2:30	0.003
2:40	0.002	2:40	0.009	2:40	0.004	2:40	0.006	2:40	0.008	2:40	0.006	2:40	0.002
2:50	0.002	2:50	0.008	2:50	0.004	2:50	0.005	2:50	0.007	2:50	0.005	2:50	0.002
3:00	0.002	3:00	0.008	3:00	0.003	3:00	0.005	3:00	0.007	3:00	0.005	3:00	0.002
3:10	0.002	3:10	0.007	3:10	0.003	3:10	0.004	3:10	0.005	3:10	0.004	3:10	0.001
3:20	0.002	3:20	0.005	3:20	0.002	3:20	0.004	3:20	0.004	3:20	0.003	3:20	0.001
3:30	0.001	3:30	0.005	3:30	0.001	3:30	0.003	3:30	0.003	3:30	0.003	3:30	0.001
3:40	0.001	3:40	0.004	3:40	0.001	3:40	0.002	3:40	0.002	3:40	0.002	3:40	0.001
3:50	0.001	3:50	0.003	3:50	0.001	3:50	0.002	3:50	0.002	3:50	0.002	3:50	0.001
4:00	0.001	4:00	0.003	4:00	0.001	4:00	0.002	4:00	0.002	4:00	0.002	4:00	0.001
4:10	0.001	4:10	0.002	4:10	0.001	4:10	0.001	4:10	0.002	4:10	0.001	4:10	0.001
4:20	0.001	4:20	0.002	4:20	0.001	4:20	0.001	4:20	0.002	4:20	0.001	4:20	0
4:30	0.001	4:30	0.002	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0
4:40	0.001	4:40	0.002	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0
4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0
5:00	0	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0
5:10	0	5:10	0.001	5:10	0	5:10	0.001	5:10	0.001	5:10	0.001	5:10	0
5:20	0	5:20	0.001	5:20	0	5:20	0.001	5:20	0.001	5:20	0.001	5:20	0
5:30	0	5:30	0.001	5:30	0	5:30	0.001	5:30	0.001	5:30	0.001	5:30	0
5:40	0	5:40	0.001	5:40	0	5:40	0.001	5:40	0.001	5:40	0.001	5:40	0
5:50	0	5:50	0.001	5:50	0	5:50	0.001	5:50	0.001	5:50	0.001	5:50	0
6:00	0	6:00	0.001	6:00	0	6:00	0.001	6:00	0.001	6:00	0.001	6:00	0
6:10	0	6:10	0.001	6:10	0	6:10	0.001	6:10	0.001	6:10	0	6:10	0
6:20	0	6:20	0.001	6:20	0	6:20	0.001	6:20	0.001	6:20	0	6:20	0
6:30	0	6:30	0.001	6:30	0	6:30	0.001	6:30	0.001	6:30	0	6:30	0
6:40	0	6:40	0.001	6:40	0	6:40	0	6:40	0.001	6:40	0	6:40	0
6:50	0	6:50	0.001	6:50	0	6:50	0	6:50	0.001	6:50	0	6:50	0
7:00	0	7:00	0.001	7:00	0	7:00	0	7:00	0.001	7:00	0	7:00	0
7:10	0	7:10	0.001	7:10	0	7:10	0	7:10	0.001	7:10	0	7:10	0
7:20	0	7:20	0.001	7:20	0	7:20	0	7:20	0.001	7:20	0	7:20	0
7:30	0	7:30	0.001	7:30	0	7:30	0	7:30	0.001	7:30	0	7:30	0
7:40	0	7:40	0.001	7:40	0	7:40	0	7:40	0.001	7:40	0	7:40	0
7:50	0	7:50	0.001	7:50	0	7:50	0	7:50	0	7:50	0	7:50	0
8:00	0	8:00	0.001	8:00	0	8:00	0	8:00	0	8:00	0	8:00	0
8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0
8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0
8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0
8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0
8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0
9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0
9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0
9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0
9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0
9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0
9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0
10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0
10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0
10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0
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10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0
11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0
11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0
11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0
11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0
11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0
11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0
12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0
12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0
12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0
12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0
12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0
12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0
13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0
13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1010		1011		1012A		1012B		1013		1014		1015	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0.001	0:20	0	0:20	0	0:20	0	0:20	0.001	0:20	0	0:20	0.001
0:30	0.009	0:30	0.002	0:30	0	0:30	0	0:30	0.028	0:30	0.002	0:30	0.004
0:40	0.021	0:40	0.005	0:40	0.001	0:40	0.001	0:40	0.098	0:40	0.005	0:40	0.011
0:50	0.052	0:50	0.028	0:50	0.005	0:50	0.005	0:50	0.315	0:50	0.022	0:50	0.044
1:00	0.054	1:00	0.032	1:00	0.018	1:00	0.014	1:00	0.913	1:00	0.022	1:00	0.044
1:10	0.049	1:10	0.027	1:10	0.022	1:10	0.02	1:10	1.085	1:10	0.022	1:10	0.044
1:20	0.047	1:20	0.018	1:20	0.022	1:20	0.02	1:20	1.05	1:20	0.022	1:20	0.044
1:30	0.028	1:30	0.008	1:30	0.022	1:30	0.018	1:30	0.959	1:30	0.022	1:30	0.041
1:40	0.016	1:40	0.004	1:40	0.021	1:40	0.015	1:40	0.773	1:40	0.022	1:40	0.036
1:50	0.013	1:50	0.003	1:50	0.018	1:50	0.013	1:50	0.563	1:50	0.021	1:50	0.031
2:00	0.01	2:00	0.003	2:00	0.016	2:00	0.012	2:00	0.42	2:00	0.02	2:00	0.027
2:10	0.008	2:10	0.002	2:10	0.014	2:10	0.01	2:10	0.319	2:10	0.017	2:10	0.022
2:20	0.007	2:20	0.002	2:20	0.012	2:20	0.009	2:20	0.252	2:20	0.015	2:20	0.018
2:30	0.006	2:30	0.002	2:30	0.01	2:30	0.008	2:30	0.208	2:30	0.013	2:30	0.015
2:40	0.006	2:40	0.002	2:40	0.009	2:40	0.008	2:40	0.178	2:40	0.012	2:40	0.013
2:50	0.005	2:50	0.001	2:50	0.008	2:50	0.007	2:50	0.157	2:50	0.01	2:50	0.011
3:00	0.005	3:00	0.001	3:00	0.008	3:00	0.007	3:00	0.146	3:00	0.009	3:00	0.01
3:10	0.004	3:10	0.001	3:10	0.007	3:10	0.006	3:10	0.136	3:10	0.008	3:10	0.008
3:20	0.003	3:20	0.001	3:20	0.006	3:20	0.006	3:20	0.114	3:20	0.007	3:20	0.007
3:30	0.002	3:30	0.001	3:30	0.006	3:30	0.005	3:30	0.089	3:30	0.006	3:30	0.006
3:40	0.002	3:40	0.001	3:40	0.006	3:40	0.005	3:40	0.069	3:40	0.005	3:40	0.005
3:50	0.002	3:50	0.001	3:50	0.005	3:50	0.005	3:50	0.054	3:50	0.005	3:50	0.004
4:00	0.001	4:00	0.001	4:00	0.005	4:00	0.005	4:00	0.043	4:00	0.004	4:00	0.004
4:10	0.001	4:10	0	4:10	0.005	4:10	0.004	4:10	0.035	4:10	0.003	4:10	0.003
4:20	0.001	4:20	0	4:20	0.005	4:20	0.004	4:20	0.03	4:20	0.003	4:20	0.003
4:30	0.001	4:30	0	4:30	0.004	4:30	0.004	4:30	0.025	4:30	0.003	4:30	0.002
4:40	0.001	4:40	0	4:40	0.004	4:40	0.004	4:40	0.022	4:40	0.002	4:40	0.002
4:50	0.001	4:50	0	4:50	0.004	4:50	0.004	4:50	0.019	4:50	0.002	4:50	0.002
5:00	0.001	5:00	0	5:00	0.004	5:00	0.004	5:00	0.017	5:00	0.002	5:00	0.002
5:10	0.001	5:10	0	5:10	0.004	5:10	0.004	5:10	0.015	5:10	0.002	5:10	0.001
5:20	0.001	5:20	0	5:20	0.003	5:20	0.003	5:20	0.013	5:20	0.001	5:20	0.001
5:30	0.001	5:30	0	5:30	0.003	5:30	0.003	5:30	0.012	5:30	0.001	5:30	0.001
5:40	0.001	5:40	0	5:40	0.003	5:40	0.003	5:40	0.011	5:40	0.001	5:40	0.001
5:50	0.001	5:50	0	5:50	0.003	5:50	0.003	5:50	0.011	5:50	0.001	5:50	0.001
6:00	0.001	6:00	0	6:00	0.003	6:00	0.003	6:00	0.01	6:00	0.001	6:00	0.001
6:10	0.001	6:10	0	6:10	0.003	6:10	0.003	6:10	0.01	6:10	0.001	6:10	0.001
6:20	0.001	6:20	0	6:20	0.003	6:20	0.003	6:20	0.009	6:20	0.001	6:20	0.001
6:30	0.001	6:30	0	6:30	0.003	6:30	0.003	6:30	0.009	6:30	0.001	6:30	0.001
6:40	0	6:40	0	6:40	0.003	6:40	0.003	6:40	0.008	6:40	0.001	6:40	0.001
6:50	0	6:50	0	6:50	0.003	6:50	0.003	6:50	0.008	6:50	0.001	6:50	0.001
7:00	0	7:00	0	7:00	0.003	7:00	0.003	7:00	0.008	7:00	0.001	7:00	0.001
7:10	0	7:10	0	7:10	0.002	7:10	0.003	7:10	0.008	7:10	0.001	7:10	0.001
7:20	0	7:20	0	7:20	0.002	7:20	0.002	7:20	0.007	7:20	0.001	7:20	0.001
7:30	0	7:30	0	7:30	0.002	7:30	0.002	7:30	0.007	7:30	0	7:30	0.001
7:40	0	7:40	0	7:40	0.002	7:40	0.002	7:40	0.007	7:40	0	7:40	0.001
7:50	0	7:50	0	7:50	0.002	7:50	0.002	7:50	0.007	7:50	0	7:50	0.001
8:00	0	8:00	0	8:00	0.002	8:00	0.002	8:00	0.006	8:00	0	8:00	0.001
8:10	0	8:10	0	8:10	0.002	8:10	0.002	8:10	0.006	8:10	0	8:10	0.001
8:20	0	8:20	0	8:20	0.002	8:20	0.002	8:20	0.006	8:20	0	8:20	0.001
8:30	0	8:30	0	8:30	0.002	8:30	0.002	8:30	0.006	8:30	0	8:30	0.001
8:40	0	8:40	0	8:40	0.002	8:40	0.002	8:40	0.006	8:40	0	8:40	0
8:50	0	8:50	0	8:50	0.002	8:50	0.002	8:50	0.006	8:50	0	8:50	0
9:00	0	9:00	0	9:00	0.002	9:00	0.002	9:00	0.006	9:00	0	9:00	0
9:10	0	9:10	0	9:10	0.002	9:10	0.002	9:10	0.005	9:10	0	9:10	0
9:20	0	9:20	0	9:20	0.002	9:20	0.002	9:20	0.005	9:20	0	9:20	0
9:30	0	9:30	0	9:30	0.002	9:30	0.002	9:30	0.005	9:30	0	9:30	0
9:40	0	9:40	0	9:40	0.002	9:40	0.002	9:40	0.005	9:40	0	9:40	0
9:50	0	9:50	0	9:50	0.002	9:50	0.002	9:50	0.005	9:50	0	9:50	0
10:00	0	10:00	0	10:00	0.002	10:00	0.002	10:00	0.005	10:00	0	10:00	0
10:10	0	10:10	0	10:10	0.002	10:10	0.002	10:10	0.005	10:10	0	10:10	0
10:20	0	10:20	0	10:20	0.002	10:20	0.002	10:20	0.005	10:20	0	10:20	0
10:30	0	10:30	0	10:30	0.002	10:30	0.002	10:30	0.005	10:30	0	10:30	0
10:40	0	10:40	0	10:40	0.002	10:40	0.002	10:40	0.004	10:40	0	10:40	0
10:50	0	10:50	0	10:50	0.002	10:50	0.002	10:50	0.004	10:50	0	10:50	0
11:00	0	11:00	0	11:00	0.002	11:00	0.002	11:00	0.004	11:00	0	11:00	0
11:10	0	11:10	0	11:10	0.002	11:10	0.002	11:10	0.004	11:10	0	11:10	0
11:20	0	11:20	0	11:20	0.001	11:20	0.002	11:20	0.004	11:20	0	11:20	0
11:30	0	11:30	0	11:30	0.001	11:30	0.002	11:30	0.004	11:30	0	11:30	0
11:40	0	11:40	0	11:40	0.001	11:40	0.002	11:40	0.004	11:40	0	11:40	0
11:50	0	11:50	0	11:50	0.001	11:50	0.002	11:50	0.004	11:50	0	11:50	0
12:00	0	12:00	0	12:00	0.001	12:00	0.001	12:00	0.004	12:00	0	12:00	0
12:10	0	12:10	0	12:10	0.001	12:10	0.001	12:10	0.004	12:10	0	12:10	0
12:20	0	12:20	0	12:20	0.001	12:20	0.001	12:20	0.004	12:20	0	12:20	0
12:30	0	12:30	0	12:30	0.001	12:30	0.001	12:30	0.004	12:30	0	12:30	0
12:40	0	12:40	0	12:40	0.001	12:40	0.001	12:40	0.004	12:40	0	12:40	0
12:50	0	12:50	0	12:50	0.001	12:50	0.001	12:50	0.004	12:50	0	12:50	0
13:00	0	13:00	0	13:00	0.001	13:00	0.001	13:00	0.004	13:00	0	13:00	0
13:10	0	13:10	0	13:10	0.001	13:10	0.001	13:10	0.003	13:10	0	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1016		1017		1018		1020		1022		1023		1025	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0.001	0:20	0.001	0:20	0.001	0:20	0.002	0:20	0.003	0:20	0.002	0:20	0.001
0:30	0.006	0:30	0.003	0:30	0.007	0:30	0.008	0:30	0.012	0:30	0.009	0:30	0.003
0:40	0.008	0:40	0.008	0:40	0.012	0:40	0.019	0:40	0.026	0:40	0.021	0:40	0.008
0:50	0.022	0:50	0.022	0:50	0.022	0:50	0.022	0:50	0.054	0:50	0.099	0:50	0.022
1:00	0.044	1:00	0.022	1:00	0.044	1:00	0.022	1:00	0.066	1:00	0.116	1:00	0.022
1:10	0.044	1:10	0.021	1:10	0.044	1:10	0.022	1:10	0.066	1:10	0.113	1:10	0.022
1:20	0.044	1:20	0.02	1:20	0.039	1:20	0.022	1:20	0.066	1:20	0.102	1:20	0.022
1:30	0.044	1:30	0.016	1:30	0.032	1:30	0.018	1:30	0.046	1:30	0.085	1:30	0.019
1:40	0.032	1:40	0.012	1:40	0.02	1:40	0.012	1:40	0.022	1:40	0.052	1:40	0.011
1:50	0.021	1:50	0.009	1:50	0.017	1:50	0.01	1:50	0.018	1:50	0.037	1:50	0.005
2:00	0.012	2:00	0.007	2:00	0.011	2:00	0.008	2:00	0.014	2:00	0.026	2:00	0.004
2:10	0.01	2:10	0.006	2:10	0.009	2:10	0.007	2:10	0.011	2:10	0.02	2:10	0.004
2:20	0.007	2:20	0.005	2:20	0.007	2:20	0.006	2:20	0.01	2:20	0.016	2:20	0.003
2:30	0.007	2:30	0.004	2:30	0.007	2:30	0.006	2:30	0.009	2:30	0.013	2:30	0.003
2:40	0.006	2:40	0.004	2:40	0.006	2:40	0.005	2:40	0.008	2:40	0.011	2:40	0.003
2:50	0.006	2:50	0.003	2:50	0.005	2:50	0.005	2:50	0.007	2:50	0.01	2:50	0.002
3:00	0.006	3:00	0.003	3:00	0.005	3:00	0.004	3:00	0.007	3:00	0.009	3:00	0.002
3:10	0.005	3:10	0.003	3:10	0.004	3:10	0.004	3:10	0.005	3:10	0.007	3:10	0.002
3:20	0.004	3:20	0.002	3:20	0.003	3:20	0.003	3:20	0.004	3:20	0.006	3:20	0.001
3:30	0.003	3:30	0.002	3:30	0.003	3:30	0.002	3:30	0.003	3:30	0.005	3:30	0.001
3:40	0.003	3:40	0.001	3:40	0.002	3:40	0.002	3:40	0.003	3:40	0.004	3:40	0.001
3:50	0.002	3:50	0.001	3:50	0.002	3:50	0.002	3:50	0.002	3:50	0.003	3:50	0.001
4:00	0.002	4:00	0.001	4:00	0.002	4:00	0.001	4:00	0.002	4:00	0.003	4:00	0.001
4:10	0.002	4:10	0.001	4:10	0.001	4:10	0.001	4:10	0.002	4:10	0.002	4:10	0.001
4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.002	4:20	0.002	4:20	0.001
4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.002	4:30	0.001
4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.002	4:40	0.001
4:50	0.001	4:50	0	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001
5:00	0.001	5:00	0	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0
5:10	0.001	5:10	0	5:10	0.001	5:10	0.001	5:10	0.001	5:10	0.001	5:10	0
5:20	0.001	5:20	0	5:20	0.001	5:20	0.001	5:20	0.001	5:20	0.001	5:20	0
5:30	0.001	5:30	0	5:30	0.001	5:30	0.001	5:30	0.001	5:30	0.001	5:30	0
5:40	0.001	5:40	0	5:40	0.001	5:40	0.001	5:40	0.001	5:40	0.001	5:40	0
5:50	0.001	5:50	0	5:50	0.001	5:50	0.001	5:50	0.001	5:50	0.001	5:50	0
6:00	0.001	6:00	0	6:00	0.001	6:00	0.001	6:00	0.001	6:00	0.001	6:00	0
6:10	0.001	6:10	0	6:10	0	6:10	0.001	6:10	0.001	6:10	0.001	6:10	0
6:20	0.001	6:20	0	6:20	0	6:20	0.001	6:20	0.001	6:20	0.001	6:20	0
6:30	0.001	6:30	0	6:30	0	6:30	0	6:30	0.001	6:30	0.001	6:30	0
6:40	0	6:40	0	6:40	0	6:40	0	6:40	0.001	6:40	0.001	6:40	0
6:50	0	6:50	0	6:50	0	6:50	0	6:50	0.001	6:50	0.001	6:50	0
7:00	0	7:00	0	7:00	0	7:00	0	7:00	0.001	7:00	0.001	7:00	0
7:10	0	7:10	0	7:10	0	7:10	0	7:10	0.001	7:10	0.001	7:10	0
7:20	0	7:20	0	7:20	0	7:20	0	7:20	0.001	7:20	0.001	7:20	0
7:30	0	7:30	0	7:30	0	7:30	0	7:30	0.001	7:30	0.001	7:30	0
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7:50	0	7:50	0	7:50	0	7:50	0	7:50	0.001	7:50	0.001	7:50	0
8:00	0	8:00	0	8:00	0	8:00	0	8:00	0	8:00	0.001	8:00	0
8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0
8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0
8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0
8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0
8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0
9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0
9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0
9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0
9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0
9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0
9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0
10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0
10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0
10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0
10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0
10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0
10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0
11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0
11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0
11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0
11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0
11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0
11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0
12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0
12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0
12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0
12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0
12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0
12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0
13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0
13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1026		1027		1028		1030		1031		1034		1035	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0.001	0:20	0.004	0:20	0.001	0:20	0	0:20	0.002	0:20	0.001	0:20	0
0:30	0.005	0:30	0.014	0:30	0.004	0:30	0.002	0:30	0.01	0:30	0.004	0:30	0.002
0:40	0.012	0:40	0.031	0:40	0.008	0:40	0.006	0:40	0.02	0:40	0.011	0:40	0.004
0:50	0.022	0:50	0.1	0:50	0.044	0:50	0.022	0:50	0.055	0:50	0.054	0:50	0.022
1:00	0.022	1:00	0.11	1:00	0.044	1:00	0.022	1:00	0.066	1:00	0.066	1:00	0.044
1:10	0.021	1:10	0.104	1:10	0.044	1:10	0.022	1:10	0.066	1:10	0.065	1:10	0.039
1:20	0.017	1:20	0.088	1:20	0.044	1:20	0.021	1:20	0.066	1:20	0.056	1:20	0.028
1:30	0.012	1:30	0.051	1:30	0.036	1:30	0.018	1:30	0.055	1:30	0.044	1:30	0.024
1:40	0.008	1:40	0.026	1:40	0.02	1:40	0.015	1:40	0.035	1:40	0.033	1:40	0.019
1:50	0.006	1:50	0.019	1:50	0.01	1:50	0.012	1:50	0.029	1:50	0.028	1:50	0.016
2:00	0.005	2:00	0.013	2:00	0.006	2:00	0.01	2:00	0.022	2:00	0.023	2:00	0.013
2:10	0.004	2:10	0.011	2:10	0.005	2:10	0.008	2:10	0.019	2:10	0.019	2:10	0.012
2:20	0.004	2:20	0.01	2:20	0.004	2:20	0.007	2:20	0.016	2:20	0.016	2:20	0.01
2:30	0.003	2:30	0.009	2:30	0.004	2:30	0.006	2:30	0.014	2:30	0.014	2:30	0.009
2:40	0.003	2:40	0.008	2:40	0.003	2:40	0.005	2:40	0.013	2:40	0.013	2:40	0.007
2:50	0.003	2:50	0.007	2:50	0.003	2:50	0.004	2:50	0.012	2:50	0.011	2:50	0.007
3:00	0.003	3:00	0.006	3:00	0.003	3:00	0.004	3:00	0.01	3:00	0.01	3:00	0.006
3:10	0.002	3:10	0.005	3:10	0.002	3:10	0.003	3:10	0.008	3:10	0.009	3:10	0.005
3:20	0.001	3:20	0.004	3:20	0.002	3:20	0.003	3:20	0.007	3:20	0.008	3:20	0.004
3:30	0.001	3:30	0.003	3:30	0.001	3:30	0.002	3:30	0.005	3:30	0.006	3:30	0.004
3:40	0.001	3:40	0.002	3:40	0.001	3:40	0.002	3:40	0.004	3:40	0.005	3:40	0.003
3:50	0.001	3:50	0.002	3:50	0.001	3:50	0.002	3:50	0.003	3:50	0.005	3:50	0.003
4:00	0.001	4:00	0.002	4:00	0.001	4:00	0.001	4:00	0.003	4:00	0.004	4:00	0.003
4:10	0.001	4:10	0.002	4:10	0.001	4:10	0.001	4:10	0.002	4:10	0.003	4:10	0.002
4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.002	4:20	0.003	4:20	0.002
4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.002	4:30	0.003	4:30	0.002
4:40	0	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.002	4:40	0.002
4:50	0	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.002	4:50	0.001
5:00	0	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.002	5:00	0.001
5:10	0	5:10	0.001	5:10	0	5:10	0.001	5:10	0.001	5:10	0.002	5:10	0.001
5:20	0	5:20	0.001	5:20	0	5:20	0.001	5:20	0.001	5:20	0.002	5:20	0.001
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5:40	0	5:40	0.001	5:40	0	5:40	0	5:40	0.001	5:40	0.001	5:40	0.001
5:50	0	5:50	0.001	5:50	0	5:50	0	5:50	0.001	5:50	0.001	5:50	0.001
6:00	0	6:00	0.001	6:00	0	6:00	0	6:00	0.001	6:00	0.001	6:00	0.001
6:10	0	6:10	0.001	6:10	0	6:10	0	6:10	0.001	6:10	0.001	6:10	0.001
6:20	0	6:20	0.001	6:20	0	6:20	0	6:20	0.001	6:20	0.001	6:20	0.001
6:30	0	6:30	0.001	6:30	0	6:30	0	6:30	0.001	6:30	0.001	6:30	0.001
6:40	0	6:40	0.001	6:40	0	6:40	0	6:40	0.001	6:40	0.001	6:40	0.001
6:50	0	6:50	0.001	6:50	0	6:50	0	6:50	0.001	6:50	0.001	6:50	0.001
7:00	0	7:00	0.001	7:00	0	7:00	0	7:00	0	7:00	0.001	7:00	0.001
7:10	0	7:10	0.001	7:10	0	7:10	0	7:10	0	7:10	0.001	7:10	0
7:20	0	7:20	0	7:20	0	7:20	0	7:20	0	7:20	0.001	7:20	0
7:30	0	7:30	0	7:30	0	7:30	0	7:30	0	7:30	0.001	7:30	0
7:40	0	7:40	0	7:40	0	7:40	0	7:40	0	7:40	0.001	7:40	0
7:50	0	7:50	0	7:50	0	7:50	0	7:50	0	7:50	0.001	7:50	0
8:00	0	8:00	0	8:00	0	8:00	0	8:00	0	8:00	0.001	8:00	0
8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0.001	8:10	0
8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0.001	8:20	0
8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0.001	8:30	0
8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0
8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0
9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0
9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0
9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0
9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0
9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0
9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0
10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0
10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0
10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0
10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0
10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0
10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0
11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0
11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0
11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0
11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0
11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0
11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0
12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0
12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0
12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0
12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0
12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0
12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0
13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0
13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1036		1038		1039		1040		1041		1043		1043D	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0.001	0:20	0.001	0:20	0	0:20	0.001	0:20	0	0:20	0.001	0:20	0
0:30	0.006	0:30	0.005	0:30	0.002	0:30	0.003	0:30	0.005	0:30	0.004	0:30	0
0:40	0.013	0:40	0.013	0:40	0.006	0:40	0.007	0:40	0.008	0:40	0.01	0:40	0.001
0:50	0.044	0:50	0.044	0:50	0.022	0:50	0.022	0:50	0.031	0:50	0.052	0:50	0.009
1:00	0.044	1:00	0.044	1:00	0.022	1:00	0.022	1:00	0.044	1:00	0.066	1:00	0.019
1:10	0.044	1:10	0.033	1:10	0.022	1:10	0.021	1:10	0.044	1:10	0.062	1:10	0.016
1:20	0.044	1:20	0.027	1:20	0.022	1:20	0.018	1:20	0.044	1:20	0.031	1:20	0.011
1:30	0.032	1:30	0.024	1:30	0.019	1:30	0.014	1:30	0.03	1:30	0.015	1:30	0.009
1:40	0.017	1:40	0.018	1:40	0.014	1:40	0.01	1:40	0.012	1:40	0.009	1:40	0.008
1:50	0.012	1:50	0.015	1:50	0.01	1:50	0.007	1:50	0.011	1:50	0.007	1:50	0.007
2:00	0.008	2:00	0.012	2:00	0.008	2:00	0.006	2:00	0.006	2:00	0.005	2:00	0.006
2:10	0.007	2:10	0.01	2:10	0.006	2:10	0.005	2:10	0.006	2:10	0.005	2:10	0.005
2:20	0.006	2:20	0.008	2:20	0.005	2:20	0.004	2:20	0.004	2:20	0.004	2:20	0.005
2:30	0.005	2:30	0.007	2:30	0.004	2:30	0.003	2:30	0.004	2:30	0.004	2:30	0.004
2:40	0.005	2:40	0.006	2:40	0.004	2:40	0.003	2:40	0.003	2:40	0.003	2:40	0.004
2:50	0.004	2:50	0.006	2:50	0.003	2:50	0.003	2:50	0.004	2:50	0.003	2:50	0.004
3:00	0.004	3:00	0.005	3:00	0.003	3:00	0.003	3:00	0.003	3:00	0.003	3:00	0.003
3:10	0.003	3:10	0.005	3:10	0.003	3:10	0.002	3:10	0.003	3:10	0.002	3:10	0.003
3:20	0.002	3:20	0.004	3:20	0.002	3:20	0.002	3:20	0.002	3:20	0.002	3:20	0.003
3:30	0.002	3:30	0.003	3:30	0.002	3:30	0.002	3:30	0.002	3:30	0.001	3:30	0.003
3:40	0.001	3:40	0.003	3:40	0.002	3:40	0.001	3:40	0.001	3:40	0.001	3:40	0.003
3:50	0.001	3:50	0.002	3:50	0.001	3:50	0.001	3:50	0.001	3:50	0.001	3:50	0.002
4:00	0.001	4:00	0.002	4:00	0.001	4:00	0.001	4:00	0.001	4:00	0.001	4:00	0.002
4:10	0.001	4:10	0.002	4:10	0.001	4:10	0.001	4:10	0.001	4:10	0.001	4:10	0.002
4:20	0.001	4:20	0.002	4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.001	4:20	0.002
4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.001	4:30	0.002
4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.002
4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.002
5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.002
5:10	0.001	5:10	0.001	5:10	0.001	5:10	0	5:10	0.001	5:10	0.001	5:10	0.002
5:20	0	5:20	0.001	5:20	0.001	5:20	0	5:20	0.001	5:20	0.001	5:20	0.002
5:30	0	5:30	0.001	5:30	0.001	5:30	0	5:30	0	5:30	0.001	5:30	0.002
5:40	0	5:40	0.001	5:40	0	5:40	0	5:40	0	5:40	0.001	5:40	0.002
5:50	0	5:50	0.001	5:50	0	5:50	0	5:50	0	5:50	0	5:50	0.002
6:00	0	6:00	0.001	6:00	0	6:00	0	6:00	0	6:00	0	6:00	0.002
6:10	0	6:10	0.001	6:10	0	6:10	0	6:10	0	6:10	0	6:10	0.001
6:20	0	6:20	0.001	6:20	0	6:20	0	6:20	0	6:20	0	6:20	0.001
6:30	0	6:30	0.001	6:30	0	6:30	0	6:30	0	6:30	0	6:30	0.001
6:40	0	6:40	0.001	6:40	0	6:40	0	6:40	0	6:40	0	6:40	0.001
6:50	0	6:50	0.001	6:50	0	6:50	0	6:50	0	6:50	0	6:50	0.001
7:00	0	7:00	0.001	7:00	0	7:00	0	7:00	0	7:00	0	7:00	0.001
7:10	0	7:10	0.001	7:10	0	7:10	0	7:10	0	7:10	0	7:10	0.001
7:20	0	7:20	0.001	7:20	0	7:20	0	7:20	0	7:20	0	7:20	0.001
7:30	0	7:30	0.001	7:30	0	7:30	0	7:30	0	7:30	0	7:30	0.001
7:40	0	7:40	0.001	7:40	0	7:40	0	7:40	0	7:40	0	7:40	0.001
7:50	0	7:50	0	7:50	0	7:50	0	7:50	0	7:50	0	7:50	0.001
8:00	0	8:00	0	8:00	0	8:00	0	8:00	0	8:00	0	8:00	0.001
8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0	8:10	0.001
8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0	8:20	0.001
8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0	8:30	0.001
8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0	8:40	0.001
8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0	8:50	0.001
9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0	9:00	0.001
9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0	9:10	0.001
9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0	9:20	0.001
9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0	9:30	0.001
9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0	9:40	0.001
9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0	9:50	0.001
10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0	10:00	0.001
10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0	10:10	0.001
10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0	10:20	0.001
10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0	10:30	0.001
10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0	10:40	0.001
10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0	10:50	0.001
11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0	11:00	0.001
11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0	11:10	0.001
11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0	11:20	0.001
11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0	11:30	0.001
11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0	11:40	0.001
11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0	11:50	0.001
12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0	12:00	0.001
12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0	12:10	0.001
12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0	12:20	0.001
12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0	12:30	0.001
12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0	12:40	0.001
12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0	12:50	0.001
13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0	13:00	0.001
13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0.001

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

1043E		1043F		1043G		1044		1045		1046		1047	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0	0:20	0	0:20	0	0:20	0.001	0:20	0.001	0:20	0	0:20	0.001
0:30	0	0:30	0	0:30	0	0:30	0.004	0:30	0.006	0:30	0.002	0:30	0.003
0:40	0	0:40	0	0:40	0	0:40	0.011	0:40	0.011	0:40	0.008	0:40	0.008
0:50	0.003	0:50	0.002	0:50	0.004	0:50	0.022	0:50	0.044	0:50	0.022	0:50	0.022
1:00	0.01	1:00	0.007	1:00	0.009	1:00	0.022	1:00	0.044	1:00	0.022	1:00	0.022
1:10	0.014	1:10	0.012	1:10	0.012	1:10	0.022	1:10	0.044	1:10	0.022	1:10	0.022
1:20	0.015	1:20	0.014	1:20	0.01	1:20	0.019	1:20	0.044	1:20	0.018	1:20	0.011
1:30	0.013	1:30	0.015	1:30	0.008	1:30	0.014	1:30	0.041	1:30	0.012	1:30	0.006
1:40	0.011	1:40	0.015	1:40	0.007	1:40	0.009	1:40	0.028	1:40	0.009	1:40	0.005
1:50	0.01	1:50	0.015	1:50	0.006	1:50	0.007	1:50	0.022	1:50	0.006	1:50	0.004
2:00	0.009	2:00	0.015	2:00	0.005	2:00	0.006	2:00	0.016	2:00	0.005	2:00	0.004
2:10	0.008	2:10	0.014	2:10	0.004	2:10	0.005	2:10	0.013	2:10	0.004	2:10	0.002
2:20	0.007	2:20	0.013	2:20	0.004	2:20	0.004	2:20	0.011	2:20	0.004	2:20	0.003
2:30	0.006	2:30	0.012	2:30	0.003	2:30	0.004	2:30	0.009	2:30	0.003	2:30	0.002
2:40	0.005	2:40	0.011	2:40	0.003	2:40	0.004	2:40	0.008	2:40	0.003	2:40	0.002
2:50	0.005	2:50	0.011	2:50	0.003	2:50	0.003	2:50	0.007	2:50	0.003	2:50	0.002
3:00	0.005	3:00	0.01	3:00	0.003	3:00	0.003	3:00	0.007	3:00	0.003	3:00	0.002
3:10	0.004	3:10	0.009	3:10	0.002	3:10	0.003	3:10	0.005	3:10	0.003	3:10	0.002
3:20	0.004	3:20	0.009	3:20	0.002	3:20	0.002	3:20	0.005	3:20	0.002	3:20	0.002
3:30	0.004	3:30	0.008	3:30	0.002	3:30	0.002	3:30	0.004	3:30	0.002	3:30	0.001
3:40	0.004	3:40	0.008	3:40	0.002	3:40	0.001	3:40	0.003	3:40	0.002	3:40	0.001
3:50	0.003	3:50	0.007	3:50	0.002	3:50	0.001	3:50	0.003	3:50	0.001	3:50	0.001
4:00	0.003	4:00	0.007	4:00	0.002	4:00	0.001	4:00	0.002	4:00	0.001	4:00	0.001
4:10	0.003	4:10	0.006	4:10	0.002	4:10	0.001	4:10	0.002	4:10	0.001	4:10	0.001
4:20	0.003	4:20	0.006	4:20	0.002	4:20	0.001	4:20	0.002	4:20	0.001	4:20	0.001
4:30	0.003	4:30	0.006	4:30	0.002	4:30	0.001	4:30	0.002	4:30	0.001	4:30	0.001
4:40	0.003	4:40	0.005	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001	4:40	0.001
4:50	0.003	4:50	0.005	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001	4:50	0.001
5:00	0.002	5:00	0.005	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001	5:00	0.001
5:10	0.002	5:10	0.005	5:10	0.001	5:10	0.001	5:10	0.001	5:10	0.001	5:10	0.001
5:20	0.002	5:20	0.004	5:20	0.001	5:20	0.001	5:20	0.001	5:20	0.001	5:20	0.001
5:30	0.002	5:30	0.004	5:30	0.001	5:30	0	5:30	0.001	5:30	0.001	5:30	0
5:40	0.002	5:40	0.004	5:40	0.001	5:40	0	5:40	0.001	5:40	0.001	5:40	0
5:50	0.002	5:50	0.004	5:50	0.001	5:50	0	5:50	0.001	5:50	0.001	5:50	0
6:00	0.002	6:00	0.004	6:00	0.001	6:00	0	6:00	0.001	6:00	0.001	6:00	0
6:10	0.002	6:10	0.004	6:10	0.001	6:10	0	6:10	0.001	6:10	0.001	6:10	0
6:20	0.002	6:20	0.004	6:20	0.001	6:20	0	6:20	0.001	6:20	0.001	6:20	0
6:30	0.002	6:30	0.003	6:30	0.001	6:30	0	6:30	0.001	6:30	0.001	6:30	0
6:40	0.002	6:40	0.003	6:40	0.001	6:40	0	6:40	0.001	6:40	0	6:40	0
6:50	0.002	6:50	0.003	6:50	0.001	6:50	0	6:50	0.001	6:50	0	6:50	0
7:00	0.002	7:00	0.003	7:00	0.001	7:00	0	7:00	0.001	7:00	0	7:00	0
7:10	0.002	7:10	0.003	7:10	0.001	7:10	0	7:10	0.001	7:10	0	7:10	0
7:20	0.002	7:20	0.003	7:20	0.001	7:20	0	7:20	0.001	7:20	0	7:20	0
7:30	0.002	7:30	0.003	7:30	0.001	7:30	0	7:30	0	7:30	0	7:30	0
7:40	0.002	7:40	0.003	7:40	0.001	7:40	0	7:40	0	7:40	0	7:40	0
7:50	0.002	7:50	0.003	7:50	0.001	7:50	0	7:50	0	7:50	0	7:50	0
8:00	0.001	8:00	0.003	8:00	0.001	8:00	0	8:00	0	8:00	0	8:00	0
8:10	0.001	8:10	0.003	8:10	0.001	8:10	0	8:10	0	8:10	0	8:10	0
8:20	0.001	8:20	0.003	8:20	0.001	8:20	0	8:20	0	8:20	0	8:20	0
8:30	0.001	8:30	0.002	8:30	0.001	8:30	0	8:30	0	8:30	0	8:30	0
8:40	0.001	8:40	0.002	8:40	0.001	8:40	0	8:40	0	8:40	0	8:40	0
8:50	0.001	8:50	0.002	8:50	0.001	8:50	0	8:50	0	8:50	0	8:50	0
9:00	0.001	9:00	0.002	9:00	0.001	9:00	0	9:00	0	9:00	0	9:00	0
9:10	0.001	9:10	0.002	9:10	0.001	9:10	0	9:10	0	9:10	0	9:10	0
9:20	0.001	9:20	0.002	9:20	0.001	9:20	0	9:20	0	9:20	0	9:20	0
9:30	0.001	9:30	0.002	9:30	0.001	9:30	0	9:30	0	9:30	0	9:30	0
9:40	0.001	9:40	0.002	9:40	0.001	9:40	0	9:40	0	9:40	0	9:40	0
9:50	0.001	9:50	0.002	9:50	0.001	9:50	0	9:50	0	9:50	0	9:50	0
10:00	0.001	10:00	0.002	10:00	0.001	10:00	0	10:00	0	10:00	0	10:00	0
10:10	0.001	10:10	0.002	10:10	0.001	10:10	0	10:10	0	10:10	0	10:10	0
10:20	0.001	10:20	0.002	10:20	0.001	10:20	0	10:20	0	10:20	0	10:20	0
10:30	0.001	10:30	0.002	10:30	0.001	10:30	0	10:30	0	10:30	0	10:30	0
10:40	0.001	10:40	0.002	10:40	0.001	10:40	0	10:40	0	10:40	0	10:40	0
10:50	0.001	10:50	0.002	10:50	0.001	10:50	0	10:50	0	10:50	0	10:50	0
11:00	0.001	11:00	0.002	11:00	0.001	11:00	0	11:00	0	11:00	0	11:00	0
11:10	0.001	11:10	0.002	11:10	0.001	11:10	0	11:10	0	11:10	0	11:10	0
11:20	0.001	11:20	0.002	11:20	0.001	11:20	0	11:20	0	11:20	0	11:20	0
11:30	0.001	11:30	0.002	11:30	0.001	11:30	0	11:30	0	11:30	0	11:30	0
11:40	0.001	11:40	0.002	11:40	0.001	11:40	0	11:40	0	11:40	0	11:40	0
11:50	0.001	11:50	0.002	11:50	0.001	11:50	0	11:50	0	11:50	0	11:50	0
12:00	0.001	12:00	0.002	12:00	0.001	12:00	0	12:00	0	12:00	0	12:00	0
12:10	0.001	12:10	0.002	12:10	0.001	12:10	0	12:10	0	12:10	0	12:10	0
12:20	0.001	12:20	0.002	12:20	0.001	12:20	0	12:20	0	12:20	0	12:20	0
12:30	0.001	12:30	0.002	12:30	0.001	12:30	0	12:30	0	12:30	0	12:30	0
12:40	0.001	12:40	0.002	12:40	0.001	12:40	0	12:40	0	12:40	0	12:40	0
12:50	0.001	12:50	0.002	12:50	0.001	12:50	0	12:50	0	12:50	0	12:50	0
13:00	0.001	13:00	0.002	13:00	0.001	13:00	0	13:00	0	13:00	0	13:00	0
13:10	0.001	13:10	0.001	13:10	0	13:10	0	13:10	0	13:10	0	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH1
File: DDPH1_100-3.CSV

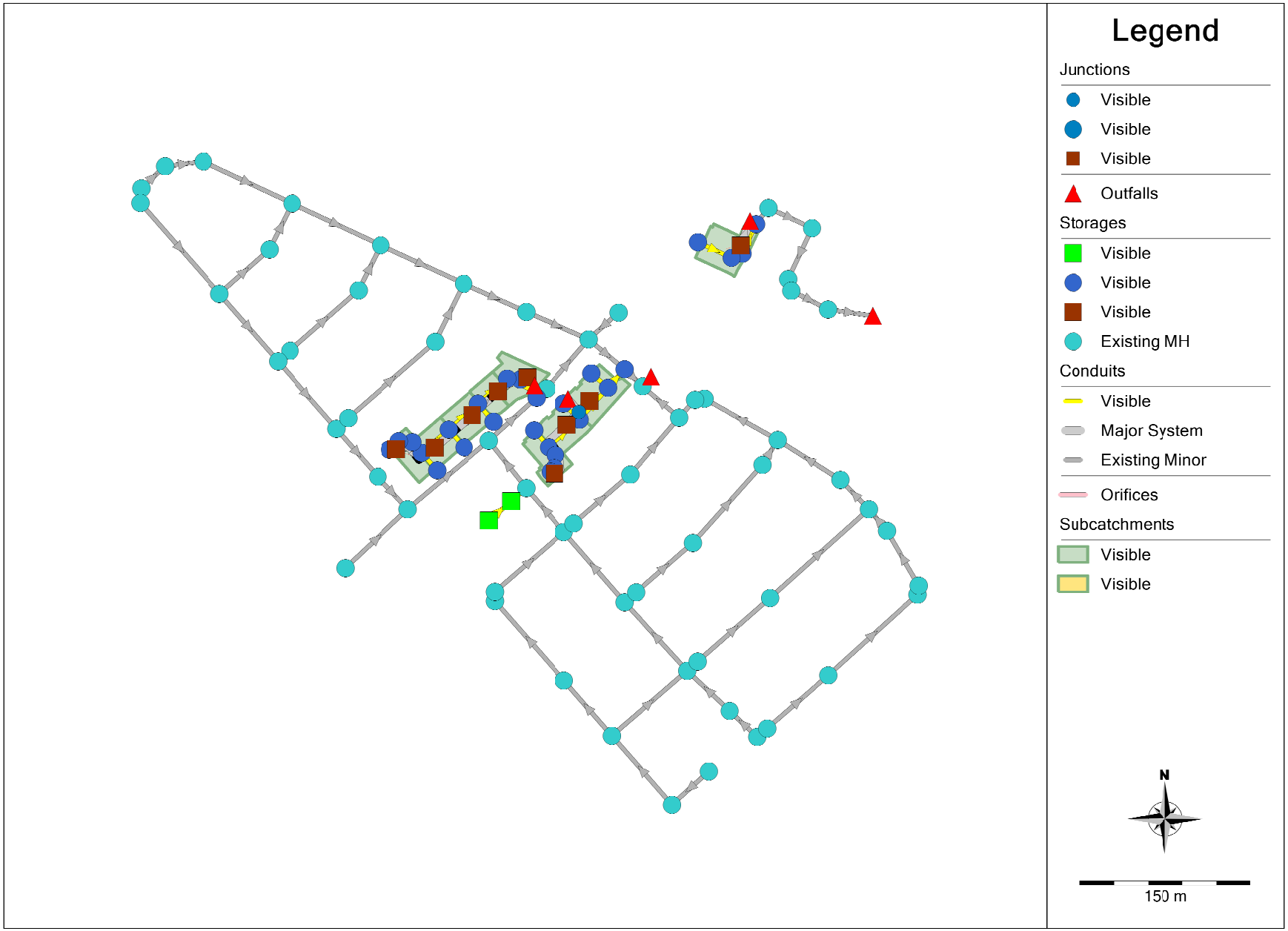
1048A		1051		1052/1052A		1052B		1053	
Time	Flow	Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0	0:10	0
0:20	0.001	0:20	0	0:20	0	0:20	0	0:20	0.002
0:30	0.007	0:30	0.002	0:30	0	0:30	0	0:30	0.008
0:40	0.01	0:40	0.002	0:40	0.001	0:40	0	0:40	0.019
0:50	0.044	0:50	0	0:50	0.006	0:50	0.003	0:50	0.082
1:00	0.044	1:00	0.022	1:00	0.018	1:00	0.01	1:00	0.088
1:10	0.044	1:10	0.022	1:10	0.026	1:10	0.015	1:10	0.078
1:20	0.044	1:20	0.022	1:20	0.027	1:20	0.016	1:20	0.047
1:30	0.044	1:30	0.016	1:30	0.026	1:30	0.015	1:30	0.038
1:40	0.044	1:40	0.007	1:40	0.024	1:40	0.013	1:40	0.025
1:50	0.034	1:50	0.006	1:50	0.021	1:50	0.011	1:50	0.02
2:00	0.012	2:00	0.003	2:00	0.019	2:00	0.01	2:00	0.015
2:10	0.006	2:10	0.003	2:10	0.017	2:10	0.009	2:10	0.012
2:20	0.008	2:20	0.002	2:20	0.015	2:20	0.008	2:20	0.01
2:30	0.005	2:30	0.002	2:30	0.013	2:30	0.007	2:30	0.009
2:40	0.006	2:40	0.002	2:40	0.012	2:40	0.006	2:40	0.008
2:50	0.005	2:50	0.002	2:50	0.011	2:50	0.006	2:50	0.007
3:00	0.005	3:00	0.002	3:00	0.009	3:00	0.006	3:00	0.006
3:10	0.004	3:10	0.001	3:10	0.009	3:10	0.005	3:10	0.005
3:20	0.003	3:20	0.001	3:20	0.008	3:20	0.005	3:20	0.004
3:30	0.002	3:30	0.001	3:30	0.007	3:30	0.005	3:30	0.004
3:40	0.002	3:40	0.001	3:40	0.007	3:40	0.004	3:40	0.003
3:50	0.001	3:50	0	3:50	0.006	3:50	0.004	3:50	0.003
4:00	0.001	4:00	0	4:00	0.006	4:00	0.004	4:00	0.002
4:10	0.001	4:10	0	4:10	0.005	4:10	0.004	4:10	0.002
4:20	0.001	4:20	0	4:20	0.005	4:20	0.004	4:20	0.002
4:30	0.001	4:30	0	4:30	0.005	4:30	0.003	4:30	0.002
4:40	0.001	4:40	0	4:40	0.005	4:40	0.003	4:40	0.001
4:50	0.001	4:50	0	4:50	0.004	4:50	0.003	4:50	0.001
5:00	0.001	5:00	0	5:00	0.004	5:00	0.003	5:00	0.001
5:10	0.001	5:10	0	5:10	0.004	5:10	0.003	5:10	0.001
5:20	0.001	5:20	0	5:20	0.004	5:20	0.003	5:20	0.001
5:30	0.001	5:30	0	5:30	0.004	5:30	0.003	5:30	0.001
5:40	0.001	5:40	0	5:40	0.003	5:40	0.003	5:40	0.001
5:50	0.001	5:50	0	5:50	0.003	5:50	0.003	5:50	0.001
6:00	0.001	6:00	0	6:00	0.003	6:00	0.002	6:00	0.001
6:10	0.001	6:10	0	6:10	0.003	6:10	0.002	6:10	0.001
6:20	0	6:20	0	6:20	0.003	6:20	0.002	6:20	0.001
6:30	0	6:30	0	6:30	0.003	6:30	0.002	6:30	0.001
6:40	0	6:40	0	6:40	0.003	6:40	0.002	6:40	0.001
6:50	0	6:50	0	6:50	0.003	6:50	0.002	6:50	0.001
7:00	0	7:00	0	7:00	0.003	7:00	0.002	7:00	0.001
7:10	0	7:10	0	7:10	0.003	7:10	0.002	7:10	0.001
7:20	0	7:20	0	7:20	0.003	7:20	0.002	7:20	0.001
7:30	0	7:30	0	7:30	0.002	7:30	0.002	7:30	0.001
7:40	0	7:40	0	7:40	0.002	7:40	0.002	7:40	0.001
7:50	0	7:50	0	7:50	0.002	7:50	0.002	7:50	0.001
8:00	0	8:00	0	8:00	0.002	8:00	0.002	8:00	0.001
8:10	0	8:10	0	8:10	0.002	8:10	0.002	8:10	0.001
8:20	0	8:20	0	8:20	0.002	8:20	0.002	8:20	0
8:30	0	8:30	0	8:30	0.002	8:30	0.002	8:30	0
8:40	0	8:40	0	8:40	0.002	8:40	0.002	8:40	0
8:50	0	8:50	0	8:50	0.002	8:50	0.002	8:50	0
9:00	0	9:00	0	9:00	0.002	9:00	0.002	9:00	0
9:10	0	9:10	0	9:10	0.002	9:10	0.002	9:10	0
9:20	0	9:20	0	9:20	0.002	9:20	0.002	9:20	0
9:30	0	9:30	0	9:30	0.002	9:30	0.002	9:30	0
9:40	0	9:40	0	9:40	0.002	9:40	0.001	9:40	0
9:50	0	9:50	0	9:50	0.002	9:50	0.001	9:50	0
10:00	0	10:00	0	10:00	0.002	10:00	0.001	10:00	0
10:10	0	10:10	0	10:10	0.002	10:10	0.001	10:10	0
10:20	0	10:20	0	10:20	0.002	10:20	0.001	10:20	0
10:30	0	10:30	0	10:30	0.002	10:30	0.001	10:30	0
10:40	0	10:40	0	10:40	0.002	10:40	0.001	10:40	0
10:50	0	10:50	0	10:50	0.002	10:50	0.001	10:50	0
11:00	0	11:00	0	11:00	0.002	11:00	0.001	11:00	0
11:10	0	11:10	0	11:10	0.002	11:10	0.001	11:10	0
11:20	0	11:20	0	11:20	0.002	11:20	0.001	11:20	0
11:30	0	11:30	0	11:30	0.002	11:30	0.001	11:30	0
11:40	0	11:40	0	11:40	0.001	11:40	0.001	11:40	0
11:50	0	11:50	0	11:50	0.001	11:50	0.001	11:50	0
12:00	0	12:00	0	12:00	0.001	12:00	0.001	12:00	0
12:10	0	12:10	0	12:10	0.001	12:10	0.001	12:10	0
12:20	0	12:20	0	12:20	0.001	12:20	0.001	12:20	0
12:30	0	12:30	0	12:30	0.001	12:30	0.001	12:30	0
12:40	0	12:40	0	12:40	0.001	12:40	0.001	12:40	0
12:50	0	12:50	0	12:50	0.001	12:50	0.001	12:50	0
13:00	0	13:00	0	13:00	0.001	13:00	0.001	13:00	0
13:10	0	13:10	0	13:10	0.001	13:10	0.001	13:10	0

Inflow Time Series - Existing Subdivision Design, Phase 1 October 2007
Cavanagh - Cope Drive Site Plans
Block 46 and Block 24

Data taken from
Path: \\ca0218-ppfss01\work_group\01-604\active\160400502 (SOHO)\design\analysis\SWM\Subm2(October2007)\DDSWMM\PH2
File: DDPH1_100-3.CSV

2000A		2000		2001		2004	
Time	Flow	Time	Flow	Time	Flow	Time	Flow
0:00	0	0:00	0	0:00	0	0:00	0
0:10	0	0:10	0	0:10	0	0:10	0
0:20	0	0:20	0.001	0:20	0.001	0:20	0.002
0:30	0.001	0:30	0.003	0:30	0.003	0:30	0.007
0:40	0.003	0:40	0.008	0:40	0.009	0:40	0.017
0:50	0.044	0:50	0.022	0:50	0.022	0:50	0.044
1:00	0.041	1:00	0.022	1:00	0.022	1:00	0.044
1:10	0.024	1:10	0.011	1:10	0.016	1:10	0.033
1:20	0.009	1:20	0.008	1:20	0.01	1:20	0.019
1:30	0.007	1:30	0.005	1:30	0.008	1:30	0.011
1:40	0.006	1:40	0.004	1:40	0.005	1:40	0.008
1:50	0.004	1:50	0.003	1:50	0.004	1:50	0.007
2:00	0.004	2:00	0.002	2:00	0.003	2:00	0.005
2:10	0.003	2:10	0.002	2:10	0.003	2:10	0.005
2:20	0.003	2:20	0.002	2:20	0.003	2:20	0.004
2:30	0.003	2:30	0.002	2:30	0.002	2:30	0.004
2:40	0.002	2:40	0.002	2:40	0.002	2:40	0.004
2:50	0.002	2:50	0.001	2:50	0.002	2:50	0.003
3:00	0.002	3:00	0.001	3:00	0.002	3:00	0.003
3:10	0.002	3:10	0.001	3:10	0.001	3:10	0.002
3:20	0.002	3:20	0.001	3:20	0.001	3:20	0.002
3:30	0.002	3:30	0.001	3:30	0.001	3:30	0.001
3:40	0.001	3:40	0.001	3:40	0.001	3:40	0.001
3:50	0.001	3:50	0.001	3:50	0.001	3:50	0.001
4:00	0.001	4:00	0.001	4:00	0.001	4:00	0.001
4:10	0.001	4:10	0	4:10	0	4:10	0.001
4:20	0.001	4:20	0	4:20	0	4:20	0.001
4:30	0.001	4:30	0	4:30	0	4:30	0.001
4:40	0.001	4:40	0	4:40	0	4:40	0.001
4:50	0.001	4:50	0	4:50	0	4:50	0.001
5:00	0.001	5:00	0	5:00	0	5:00	0.001
5:10	0.001	5:10	0	5:10	0	5:10	0.001
5:20	0.001	5:20	0	5:20	0	5:20	0
5:30	0.001	5:30	0	5:30	0	5:30	0
5:40	0.001	5:40	0	5:40	0	5:40	0
5:50	0.001	5:50	0	5:50	0	5:50	0
6:00	0.001	6:00	0	6:00	0	6:00	0
6:10	0.001	6:10	0	6:10	0	6:10	0
6:20	0.001	6:20	0	6:20	0	6:20	0
6:30	0	6:30	0	6:30	0	6:30	0
6:40	0	6:40	0	6:40	0	6:40	0
6:50	0	6:50	0	6:50	0	6:50	0
7:00	0	7:00	0	7:00	0	7:00	0

C.2 PCSWMM Data


Legend
Junctions
Visible
Visible
Visible
Outfalls
Storages
Visible
Visible
Visible
Existing MH
Conduits
Visible
Major System
Existing Minor
Orifices
Subcatchments
Visible
Visible
N
150 m

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
[TITLE]
;;Project Title/Notes
Cope Drive Units
Option 1: Increase allowable minor system discharge
HGL-2023-100yr: Subdivision HGL with current site design, 100-
year 3-hour design storm
v0: No conduit exit loss
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[OPTIONS]
;;Option             Value
FLOW_UNITS           CMS
INFILTRATION         HORTON
FLOW_ROUTING         DYNWAVE
LINK_OFFSETS         ELEVATION
MIN_SLOPE            0
ALLOW_PONDING        NO
SKIP_STEADY_STATE    NO

START_DATE           02/10/2023
START_TIME           00:00:00
REPORT_START_DATE    02/10/2023
REPORT_START_TIME    00:00:00
END_DATE             02/11/2023
END_TIME             00:00:00
SWEEP_START          01/01
SWEEP_END            12/31
DRY_DAYS             0
REPORT_STEP          00:01:00
WET_STEP             00:05:00
DRY_STEP             00:05:00
ROUTING_STEP         5
RULE_STEP            00:00:00

INERTIAL_DAMPING     PARTIAL
NORMAL_FLOW_LIMITED  BOTH
FORCE_MAIN_EQUATION  H-W
VARIABLE_STEP        0
LENGTHENING_STEP     0
MIN_SURFAREA         0
MAX_TRIALS           8
HEAD_TOLERANCE       0.0015
SYS_FLOW_TOL         5
LAT_FLOW_TOL         5
MINIMUM_STEP         0.5
THREADS              4

[EVAPORATION]
;;Data Source    Parameters
;;--------------- ----------------
CONSTANT         0.0
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- -------- -------- ----------
August4_1988     INTENSITY 0:05     1.0      TIMESERIES
August4_1988
August8_1996     INTENSITY 0:05     1.0      TIMESERIES
August8_1996
Chicago_100yr_3h INTENSITY 0:10     1.0      TIMESERIES
Chicago_100yr_3h
Chicago_100yr+20%_3h INTENSITY 0:10     1.0      TIMESERIES
Chicago_100yr+20%_3h
Chicago_2yr_3h   INTENSITY 0:10     1.0      TIMESERIES
Chicago_2yr_3h
Chicago_5yr_3h   INTENSITY 0:10     1.0      TIMESERIES
Chicago_5yr_3h
July1_1979       INTENSITY 1:00     1.0      TIMESERIES
July1_1979
SCS_Type_II_100yr_103.2mm INTENSITY 1:00     1.0      TIMESERIES
SCS_Type_II_100yr_103.2mm

[SUBCATCHMENTS]
;;Name           Rain Gage        Outlet           Area
%Imperv  Width    %Slope   CurbLen  SnowPack
;;-------------- ---------------- ---------------- -------- -----
--- -------- -------- -------- ----------------
;BLK-104
C102A            Chicago_100yr_3h CB-102           0.141479 80
78       2        0
;BLK-24
C304A            Chicago_100yr_3h CB-304           0.153133 87.14
70       2        0
;BLK-24
C306A            Chicago_100yr_3h CB-306           0.118501 87.14
70       2        0
;BLK-24
C310A            Chicago_100yr_3h CB-310           0.092817 67.14
86       2        0
;BLK-46
C502A            Chicago_100yr_3h CB-502           0.115174 54.29
82       2        0
;BLK-46
C504A            Chicago_100yr_3h CB-504           0.072639 85.71
64       2        0
;BLK-46
C506A            Chicago_100yr_3h CB-506           0.108034 88.57
64       2        0
;BLK-46
C508A            Chicago_100yr_3h CB-508           0.104224 87.14
64       2        0
;BLK-46
C512A            Chicago_100yr_3h CB-512           0.089376 68.57
85       2        0

[SUBAREAS]
;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv
PctZero    RouteTo    PctRouted
;;-------------- ---------- ---------- ---------- ---------- ----
------ ---------- ----------
C102A            0.013      0.25       1.57       4.67       0
OUTLET
C304A            0.013      0.25       1.57       4.67       0
OUTLET
C306A            0.013      0.25       1.57       4.67       0
OUTLET
C310A            0.013      0.25       1.57       4.67       0
OUTLET
C502A            0.013      0.25       1.57       4.67       0
OUTLET
C504A            0.013      0.25       1.57       4.67       0
OUTLET
C506A            0.013      0.25       1.57       4.67       0
OUTLET
C508A            0.013      0.25       1.57       4.67       0
OUTLET
C512A            0.013      0.25       1.57       4.67       0
OUTLET

[INFILTRATION]
;;Subcatchment   Param1     Param2     Param3     Param4
Param5
;;-------------- ---------- ---------- ---------- ---------- ----
------
C102A            76.2       13.2       4.14       7          0
C304A            76.2       13.2       4.14       7          0
C306A            76.2       13.2       4.14       7          0
C310A            76.2       13.2       4.14       7          0
C502A            76.2       13.2       4.14       7          0
C504A            76.2       13.2       4.14       7          0
C506A            76.2       13.2       4.14       7          0
C508A            76.2       13.2       4.14       7          0
C512A            76.2       13.2       4.14       7          0

[JUNCTIONS]
;;Name           Elevation  MaxDepth   InitDepth  SurDepth
Aponded
;;-------------- ---------- ---------- ---------- ---------- ----
------
J1               96.6       0          0          0          0

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated
Route To
;;-------------- ---------- ---------- ---------------- --------
----------------
2005             93.73      FIXED      94.65            YES
Diversion-1053   93.09      FIXED      94.48            YES
OF1              96.6       FREE                        NO
OF2              96.5       FREE                        NO
OF3              96         FREE                        NO

[STORAGE]
;;Name           Elev.    MaxDepth   InitDepth  Shape      Curve
Name/Params            N/A      Fevap    Psi        Ksat       IMD
;;-------------- -------- ---------- ---------- ---------- ------
---------------------- -------- --------           --------- ------
--
1001             95.32    2.93       0          FUNCTIONAL 0
0        1.13    0        0
1002             95.07    2.96       0          FUNCTIONAL 0
0        1.13    0        0
1004             94.91    2.99       0          FUNCTIONAL 0
0        1.13    0        0
1005             94.67    3.23       0          FUNCTIONAL 0
0        1.13    0        0
1006             94.44    3.31       0          FUNCTIONAL 0
0        1.13    0        0
1006A            94.34    3.36       0          FUNCTIONAL 0
0        1.13    0        0
1007             95.16    2.84       0          FUNCTIONAL 0
0        1.13    0        0
1008             94.89    3.06       0          FUNCTIONAL 0
0        1.13    0        0
1009             94.69    3.06       0          FUNCTIONAL 0
0        1.13    0        0
1010             94.44    3.21       0          FUNCTIONAL 0
0        1.13    0        0
1011             94.11    3.29       0          FUNCTIONAL 0
0        1.13    0        0
;0.7
1012             93.91    3.31       0          FUNCTIONAL 0
0        1.13    0        0
1012A            94.67    2.82       0          FUNCTIONAL 0
0        1.13    0        0
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
1012B              94.83    2.65       0          FUNCTIONAL 0
0          1.13     0        0
;1.02
1013               93.61    2.99       0          FUNCTIONAL 0
0          1.13     0        0
;1.09
1014               93.53    3.29       0          FUNCTIONAL 0
0          1.13     0        0
;1.18
1015               93.43    3.48       0          FUNCTIONAL 0
0          1.13     0        0
;1.25
1016               93.33    3.45       0          FUNCTIONAL 0
0          1.13     0        0
1017               95.14    2.56       0          FUNCTIONAL 0
0          1.13     0        0
1018               94.85    2.95       0          FUNCTIONAL 0
0          1.13     0        0
1019               94.59    2.91       0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
102_(C-STRM-NEW)   94.526   1.581      0          FUNCTIONAL 0
0          1.13     0        0
1020               94.49    2.96       0          FUNCTIONAL 0
0          1.13     0        0
1021               94.38    2.92       0          FUNCTIONAL 0
0          1.13     0        0
1022               94.88    2.62       0          FUNCTIONAL 0
0          1.13     0        0
1023               94.57    2.83       0          FUNCTIONAL 0
0          1.13     0        0
1024               94.18    3.02       0          FUNCTIONAL 0
0          1.13     0        0
1025               94.04    3.21       0          FUNCTIONAL 0
0          1.13     0        0
1026               94.76    2.79       0          FUNCTIONAL 0
0          1.13     0        0
1027               94.44    2.99       0          FUNCTIONAL 0
0          1.13     0        0
1028               94.18    2.92       0          FUNCTIONAL 0
0          1.13     0        0
1029               93.91    3.14       0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
103_(C-STRM-NEW)   94.59    1.621      0          FUNCTIONAL 0
0          1.13     0        0
1030               94.38    2.82       0          FUNCTIONAL 0
0          1.13     0        0
1031               94.01    3.09       0          FUNCTIONAL 0
0          1.13     0        0
1033               95.23    2.4        0          FUNCTIONAL 0
0          1.13     0        0
1034               95.11    2.39       0          FUNCTIONAL 0
0          1.13     0        0
1035               94.8     2.45       0          FUNCTIONAL 0
0          1.13     0        0
1036               94.6     2.85       0          FUNCTIONAL 0
0          1.13     0        0
1037               95.13    2.47       0          FUNCTIONAL 0
0          1.13     0        0
1038               94.94    2.51       0          FUNCTIONAL 0
0          1.13     0        0
1039               94.46    2.94       0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
104_(C-STRM-NEW)   94.73    1.743      0          FUNCTIONAL 0
0          1.13     0        0
1040               94.76    2.49       0          FUNCTIONAL 0
0          1.13     0        0
1041               94.48    2.72       0          FUNCTIONAL 0
0          1.13     0        0
1042               94.09    3.11       0          FUNCTIONAL 0
0          1.13     0        0
1043               94.44    2.69       0          FUNCTIONAL 0
0          1.13     0        0
;0.45
1043A              94.23    2.73       0          FUNCTIONAL 0
0          1.13     0        0
1044               94.65    2.45       0          FUNCTIONAL 0
0          1.13     0        0
1045               94.25    2.8        0          FUNCTIONAL 0
0          1.13     0        0
1046               93.86    2.84       0          FUNCTIONAL 0
0          1.13     0        0
;0.84
1047               93.74    2.93       0          FUNCTIONAL 0
0          1.13     0        0
;1.31
1048               93.24    3.26       0          FUNCTIONAL 0
0          1.13     0        0
;0.43
1048A              94.14    1.96       0          FUNCTIONAL 0
0          1.13     0        0
1049               93.72    3.18       0          FUNCTIONAL 0
0          1.13     0        0
1050               93.7     3.1        0          FUNCTIONAL 0
0          1.13     0        0
;0.99
1051               93.57    3.1        0          FUNCTIONAL 0
0          1.13     0        0
;1.4
1052               93.1     4          0          FUNCTIONAL 0
0          1.13     0        0
1053               94.72    2.58       0          FUNCTIONAL 0
0          1.13     0        0
2000               94.33    2.03       0          FUNCTIONAL 0
0          1.13     0        0
2001               94.24    2.72       0          FUNCTIONAL 0
0          1.13     0        0
2002               94.14    3.47       0          FUNCTIONAL 0
0          1.13     0        0
2003               94.11    3.51       0          FUNCTIONAL 0
0          1.13     0        0
2004               93.87    3.56       0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
302_(C-STRM-NEW)   93.961   2.698      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
303_(C-STRM-NEW)   94.177   2.638      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
304_(C-STRM-NEW)   94.04    2.535      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
305_(C-STRM-NEW)   94.25    2.437      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
306_(C-STRM-NEW)   94.31    2.572      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
307_(C-STRM-NEW)   94.44    2.604      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
308_(C-STRM-NEW)   94.4     2.45       0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
309_(C-STRM-NEW)   94.47    2.304      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
310_(C-STRM-NEW)   94.519   2.294      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
502_(C-STRM-NEW)   94.146   2.427      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
503_(C-STRM-NEW)   94.198   2.451      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
504_(C-STRM-NEW)   94.294   2.446      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
505_(C-STRM-NEW)   94.51    2.438      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
506_(C-STRM-NEW)   94.458   2.329      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
507_(C-STRM-NEW)   94.6     2.465      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
508_(C-STRM-NEW)   94.639   2.201      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
509_(C-STRM-NEW)   94.768   2.229      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
510_(C-STRM-NEW)   94.741   2.088      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
511_(C-STRM-NEW)   94.811   1.996      0          FUNCTIONAL 0
0          1.13     0        0
;1200mm
512_(C-STRM-NEW)   94.878   2.215      0          FUNCTIONAL 0
0          1.13     0        0
;96.08
CB-102             94.7     1.64       0          TABULAR    Curve8
0          0
;96.45
CB-304             95.07    1.68       0          TABULAR    Curve7
0          0
;96.48
CB-306             95.1     1.68       0          TABULAR    Curve7
0          0
;96.69
CB-310             95.31    1.59       0          TABULAR    Curve6
0          0
;96.48
CB-502             95.1     1.77       0          TABULAR    Curve5
0          0
;96.57
CB-504             95.19    1.69       0          TABULAR    Curve4
0          0
;96.60
CB-506             95.22    1.59       0          TABULAR    Curve3
0          0
;96.56
CB-508             95.18    1.68       0          TABULAR    Curve2
0          0
;96.63
CB-512             95.25    1.62       0          TABULAR    Curve1
0          0
;94.74
STM100             94.4     1.851      0          FUNCTIONAL 0
0          1.13     0        0
STM301             93.167   3.393      0          FUNCTIONAL 0
0          1.13     0        0
STM501             93.348   3.432      0          FUNCTIONAL 0
0          1.13     0        0

[CONDUITS]
;;Name            From Node        To Node          Length
Roughness  InOffset   OutOffset  InitFlow   MaxFlow
;;--------------- ---------------- ---------------- ---------- ---
------- ---------- ---------- ---------- ----------
;300mm
102-100_(C-STRM-NEW) 102_(C-STRM-NEW) STM100       28.327
0.013      94.526     94.43      0          0
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
;300mm
103-102_(C-STRM-NEW) 103_(C-STRM-NEW) 102_(C-STRM-NEW) 10.426
0.013      94.592     94.556     0          0
;300mm
104-103_(C-STRM-NEW) 104_(C-STRM-NEW) 103_(C-STRM-NEW) 32.398
0.013      94.732     94.622     0          0
;450mm
302-301_(C-STRM-NEW) 302_(C-STRM-NEW) STM301       21.579
0.013      93.961     93.92      0          0
;300mm
303-302_(C-STRM-NEW) 303_(C-STRM-NEW) 302_(C-STRM-NEW) 19.213
0.013      94.177     94.111     0          0
;450mm
304-302_(C-STRM-NEW) 304_(C-STRM-NEW) 302_(C-STRM-NEW) 37.122
0.013      94.04      93.967     0          0
;300mm
305-304_(C-STRM-NEW) 305_(C-STRM-NEW) 304_(C-STRM-NEW) 19.71
0.013      94.257     94.19      0          0
;300mm
306-304_(C-STRM-NEW) 306_(C-STRM-NEW) 304_(C-STRM-NEW) 36.365
0.013      94.313     94.19      0          0
;300mm
307-306_(C-STRM-NEW) 307_(C-STRM-NEW) 306_(C-STRM-NEW) 19.792
0.013      94.44      94.373     0          0
;300mm
308-306_(C-STRM-NEW) 308_(C-STRM-NEW) 306_(C-STRM-NEW) 8.786
0.013      94.403     94.373     0          0
;300mm
309-308_(C-STRM-NEW) 309_(C-STRM-NEW) 308_(C-STRM-NEW) 11.472
0.013      94.472     94.433     0          0
;300mm
310-309_(C-STRM-NEW) 310_(C-STRM-NEW) 309_(C-STRM-NEW) 4.858
0.013      94.519     94.502     0          0
;450mm
502-501_(C-STRM-NEW) 502_(C-STRM-NEW) STM501       21.32
0.013      94.146     94.1       0          0
;450mm
503-502_(C-STRM-NEW) 503_(C-STRM-NEW) 502_(C-STRM-NEW) 11.437
0.013      94.198     94.176     0          0
;450mm
504-503_(C-STRM-NEW) 504_(C-STRM-NEW) 503_(C-STRM-NEW) 33.712
0.013      94.294     94.228     0          0
;300mm
505-504_(C-STRM-NEW) 505_(C-STRM-NEW) 504_(C-STRM-NEW) 20.715
0.013      94.514     94.444     0          0
;375mm
506-504_(C-STRM-NEW) 506_(C-STRM-NEW) 504_(C-STRM-NEW) 34.409
0.013      94.458     94.369     0          0
;300mm
507-506_(C-STRM-NEW) 507_(C-STRM-NEW) 506_(C-STRM-NEW) 20.726
0.013      94.604     94.533     0          0
;300mm
508-506_(C-STRM-NEW) 508_(C-STRM-NEW) 506_(C-STRM-NEW) 30.999
0.013      94.639     94.533     0          0
;300mm
509-508_(C-STRM-NEW) 509_(C-STRM-NEW) 508_(C-STRM-NEW) 20.485
0.013      94.768     94.699     0          0
;300mm
510-508_(C-STRM-NEW) 510_(C-STRM-NEW) 508_(C-STRM-NEW) 12.377
0.013      94.741     94.699     0          0
;300mm
511-510_(C-STRM-NEW) 511_(C-STRM-NEW) 510_(C-STRM-NEW) 11.772
0.013      94.811     94.771     0          0
;300mm
512-511_(C-STRM-NEW) 512_(C-STRM-NEW) 511_(C-STRM-NEW) 11.069
0.013      94.878     94.841     0          0
C10             CB-310          CB-306          54.641
0.013      96.8       96.68      0          0
C11             CB-306          J1              15.48
0.013      96.68      96.6       0          0
C12             J1              OF2             14.503
0.013      96.6       96.5       0          0
C13             CB-304          J1              13.358
0.013      96.65      96.6       0          0
C14             CB-102          OF3             22.714
0.013      96.24      96         0          0
C2              CB-512          CB-508          43.08
0.013      96.77      96.76      0          0
C4              CB-508          CB-506          43.398
0.013      96.76      96.71      0          0
C6              CB-506          CB-504          30.837
0.013      96.71      96.68      0          0
C68             1002            1004            79.944
0.013      95.07      94.91      0          0
C8              CB-504          CB-502          28.637
0.013      96.68      96.67      0          0
C9              CB-502          OF1             9.657
0.013      96.67      96.6       0          0
L101            1004            1005            63.912
0.013      94.91      94.8       0          0
L102            1005            1006            91.941
0.013      94.67      94.44      0          0
L103A           1006            1006A           8.06
0.013      94.44      94.42      0          0
L103B           1006A           1011            79.518
0.013      94.34      94.18      0          0
L104            1004            1009            86.732
0.013      95.44      94.85      0          0
L105            1007            1008            33.234
0.013      95.16      95.04      0          0
L106            1009            1010            81.035
0.013      94.69      94.51      0          0
L107            1010            1011            80.967
0.013      94.44      94.26      0          0
L108            1030            1031            64.946
0.013      94.38      94.23      0          0
L109            1031            1051            65.562
0.013      94.01      93.88      0          0
L110            1033            1034            12.928
0.013      95.31      95.26      0          0
L111            1034            1035            105.17
0.013      95.11      94.8       0          0
L112            1035            1036            58.34
0.013      94.8       94.68      0          0
L113            1036            1039            44.883
0.013      94.6       94.53      0          0
L114            1039            1042            85.724
0.013      94.46      94.24      0          0
L115            1042            1046            79.822
0.013      94.09      93.93      0          0
L116            1046            1047            60.021
0.013      93.86      93.74      0          0
L117            1047            1048            59.797
0.013      93.74      93.61      0          0
L118            1033            1037            28.067
0.013      95.23      95.13      0          0
L119            1037            1038            33.831
0.013      95.13      95.02      0          0
L120            1038            1039            85.977
0.013      94.94      94.68      0          0
L121            1035            1053            78.006
0.013      94.99      94.79      0          0
L122            1053            1043            78.006
0.013      94.72      94.52      0          0
L123            1043            1043A           55.446
0.013      94.44      94.31      0          0
L124            1043A           1014            38.784
0.013      94.23      94.13      0          0
L125            1040            1041            79.903
0.013      94.76      94.56      0          0
L126            1041            1042            43.951
0.013      94.48      94.39      0          0
L127            1044            1045            101.082
0.013      94.65      94.4       0          0
L128            1045            1046            56.656
0.013      94.25      94.16      0          0
L129            1008            1009            51.231
0.013      94.89      94.76      0          0
L130            1025            1029            65.085
0.013      94.04      93.91      0          0
L131            1016            1048            60.5
0.013      93.33      93.24      0          0
L138            1012B           1012A           25.59
0.013      94.83      94.67      0          0
L139            1012A           1012            17.492
0.013      94.67      94.43      0          0
L140            1048A           1048            34.829
0.013      94.14      94.06      0          0
L31             2001            2002            49.342
0.013      94.24      94.14      0          0
L32             2002            2003            10.582
0.013      94.14      94.11      0          0
L33             2003            2004            36.326
0.013      94.11      93.95      0          0
L34             2004            2005            39.598
0.013      93.87      93.73      0          0
L46-1           1015            STM501          55.901
0.013      93.43      93.348     0          0
L46-2           STM501          1016            11.88
0.013      93.348     93.33      0          0
L47-1           1048            STM301          40.657
0.013      93.24      93.167     0          0
L47-2           STM301          1052            21.86
0.013      93.167     93.13      0          0
L48             1052            Diversion-1053  11.237
0.013      93.1       93.09      0          0
L49             1013            1014            74.913
0.013      93.61      93.53      0          0
L50             1014            1015            92.1
0.013      93.53      93.43      0          0
L56             2000            2001            42.002
0.013      94.33      94.24      0          0
L57             STM100          2000            17.842
0.013      94.79      94.48      0          0
L59             1011            1012            50.634
0.013      94.11      93.98      0          0
L60             1012            1015            52.722
0.013      93.91      93.8       0          0
L83             1017            1018            70.77
0.013      95.14      94.93      0          0
L84             1018            1019            105.059
0.013      94.85      94.59      0          0
L85             1019            1020            8.1
0.013      94.59      94.57      0          0
L86             1020            1021            55.271
0.013      94.49      94.38      0          0
L87             1021            1024            24.594
0.013      94.38      94.33      0          0
L88             1024            1025            35.837
0.013      94.18      94.11      0          0
L89             1029            1049            73.44
0.013      93.91      93.72      0          0
L90             1049            1050            8.491
0.013      93.72      93.7       0          0
L91             1050            1051            20.886
0.013      93.7       93.65      0          0
L92             1051            1052            41.983
0.013      93.57      93.43      0          0
L93             1022            1023            84.451
0.013      94.88      94.72      0          0
L94             1023            1024            116.004
0.013      94.57      94.33      0          0
L95             1026            1027            65.709
0.013      94.76      94.59      0          0
L96             1027            1028            91.482
0.013      94.44      94.26      0          0
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
L97             1028            1029            25.415
0.013      94.18      94.13      0          0
L98             1001            1002            43.379
0.013      95.32      95.22      0          0

[ORIFICES]
;;Name           From Node       To Node         Type
Offset     Qcoeff     Gated    CloseTime
;;-------------- --------------- --------------- ------------ -
--------- ---------- -------- ----------
CB-102A-1       CB-102          102_(C-STRM-NEW) SIDE
94.7       0.572      NO       0
CB102-A-2       CB-102          102_(C-STRM-NEW) SIDE
94.7       0.572      NO       0
CB-304A-1       CB-304          304_(C-STRM-NEW) SIDE
95.07      0.572      NO       0
CB-304A-2       CB-304          304_(C-STRM-NEW) SIDE
95.07      0.572      NO       0
CB-306A-1       CB-306          306_(C-STRM-NEW) SIDE
95.1       0.572      NO       0
CB-306A-2       CB-306          306_(C-STRM-NEW) SIDE
95.1       0.572      NO       0
CB-310A-1       CB-310          310_(C-STRM-NEW) SIDE
95.31      0.572      NO       0
CB-310A-2       CB-310          310_(C-STRM-NEW) SIDE
95.31      0.572      NO       0
CB-502A-1       CB-502          502_(C-STRM-NEW) SIDE
95.1       0.572      NO       0
CB-504A-1       CB-504          504_(C-STRM-NEW) SIDE
95.19      0.572      NO       0
CB-504A-2       CB-504          504_(C-STRM-NEW) SIDE
95.19      0.572      NO       0
CB-506A-1       CB-506          506_(C-STRM-NEW) SIDE
95.22      0.572      NO       0
CB-506A-2       CB-506          506_(C-STRM-NEW) SIDE
95.22      0.572      NO       0
CB-508A-1       CB-508          508_(C-STRM-NEW) SIDE
95.18      0.572      NO       0
CB-508A-2       CB-508          508_(C-STRM-NEW) SIDE
95.18      0.572      NO       0
CB-512A-1       CB-512          512_(C-STRM-NEW) SIDE
95.25      0.572      NO       0
CB-512A-2       CB-512          512_(C-STRM-NEW) SIDE
95.25      0.572      NO       0

[XSECTIONS]
;;Link           Shape        Geom1            Geom2      Geom3
Geom4      Barrels    Culvert
;;-------------- ------------ ---------------- ---------- -------
--- ---------- ---------- ----------
102-100_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
103-102_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
104-103_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
302-301_(C-STRM-NEW) CIRCULAR 0.45             0          0
0          1
303-302_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
304-302_(C-STRM-NEW) CIRCULAR 0.45             0          0
0          1
305-304_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
306-304_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
307-306_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
308-306_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
309-308_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
310-309_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
502-501_(C-STRM-NEW) CIRCULAR 0.45             0          0
0          1
503-502_(C-STRM-NEW) CIRCULAR 0.45             0          0
0          1
504-503_(C-STRM-NEW) CIRCULAR 0.45             0          0
0          1
505-504_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
506-504_(C-STRM-NEW) CIRCULAR 0.375            0          0
0          1
507-506_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
508-506_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
509-508_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
510-508_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
511-510_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
512-511_(C-STRM-NEW) CIRCULAR 0.3              0          0
0          1
C10             IRREGULAR    18mROW           0          0
0          1
C11             IRREGULAR    18mROW           0          0
0          1
C12             IRREGULAR    18mROW           0          0
0          1
C13             IRREGULAR    18mROW           0          0
0          1
C14             IRREGULAR    18mROW           0          0
0          1
C2              IRREGULAR    18mROW           0          0
0          1
C4              IRREGULAR    18mROW           0          0
0          1
C6              IRREGULAR    18mROW           0          0
0          1
C68             CIRCULAR     0.525            0          0
0          1
C8              IRREGULAR    18mROW           0          0
0          1
C9              IRREGULAR    18mROW           0          0
0          1
L101            CIRCULAR     0.525            0          0
0          1
L102            CIRCULAR     0.6              0          0
0          1
L103A           CIRCULAR     0.6              0          0
0          1
L103B           CIRCULAR     0.675            0          0
0          1
L104            CIRCULAR     0.375            0          0
0          1
L105            CIRCULAR     0.3              0          0
0          1
L106            CIRCULAR     0.525            0          0
0          1
L107            CIRCULAR     0.6              0          0
0          1
L108            CIRCULAR     0.375            0          0
0          1
L109            CIRCULAR     0.6              0          0
0          1
L110            CIRCULAR     0.3              0          0
0          1
L111            CIRCULAR     0.45             0          0
0          1
L112            CIRCULAR     0.45             0          0
0          1
L113            CIRCULAR     0.525            0          0
0          1
L114            CIRCULAR     0.6              0          0
0          1
L115            CIRCULAR     0.75             0          0
0          1
L116            CIRCULAR     0.825            0          0
0          1
L117            CIRCULAR     0.825            0          0
0          1
L118            CIRCULAR     0.3              0          0
0          1
L119            CIRCULAR     0.3              0          0
0          1
L120            CIRCULAR     0.375            0          0
0          1
L121            CIRCULAR     0.375            0          0
0          1
L122            CIRCULAR     0.45             0          0
0          1
L123            CIRCULAR     0.525            0          0
0          1
L124            CIRCULAR     0.6              0          0
0          1
L125            CIRCULAR     0.375            0          0
0          1
L126            CIRCULAR     0.45             0          0
0          1
L127            CIRCULAR     0.375            0          0
0          1
L128            CIRCULAR     0.525            0          0
0          1
L129            CIRCULAR     0.45             0          0
0          1
L130            CIRCULAR     0.825            0          0
0          1
L131            RECT_CLOSED  1.2              1.8        0
0          1
L138            CIRCULAR     0.3              0          0
0          1
L139            CIRCULAR     0.3              0          0
0          1
L140            CIRCULAR     0.375            0          0
0          1
L31             CIRCULAR     0.45             0          0
0          1
L32             CIRCULAR     0.45             0          0
0          1
L33             CIRCULAR     0.45             0          0
0          1
L34             CIRCULAR     0.525            0          0
0          1
L46-1           RECT_CLOSED  1.2              1.8        0
0          1
L46-2           RECT_CLOSED  1.2              1.8        0
0          1
L47-1           RECT_CLOSED  1.2              1.8        0
0          1
L47-2           RECT_CLOSED  1.2              1.8        0
0          1
L48             RECT_CLOSED  1.2              2.4        0
0          1
L49             RECT_CLOSED  1.2              1.8        0
0          1
L50             RECT_CLOSED  1.2              1.8        0
0          1
L56             CIRCULAR     0.45             0          0
0          1
L57             CIRCULAR     0.3              0          0
0          1
L59             CIRCULAR     0.75             0          0
0          1
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
L60             CIRCULAR     0.825          0          0
0          1
L83             CIRCULAR     0.45           0          0
0          1
L84             CIRCULAR     0.525          0          0
0          1
L85             CIRCULAR     0.525          0          0
0          1
L86             CIRCULAR     0.6            0          0
0          1
L87             CIRCULAR     0.6            0          0
0          1
L88             CIRCULAR     0.75           0          0
0          1
L89             CIRCULAR     0.825          0          0
0          1
L90             CIRCULAR     0.825          0          0
0          1
L91             CIRCULAR     0.825          0          0
0          1
L92             CIRCULAR     0.9            0          0
0          1
L93             CIRCULAR     0.45           0          0
0          1
L94             CIRCULAR     0.6            0          0
0          1
L95             CIRCULAR     0.375          0          0
0          1
L96             CIRCULAR     0.525          0          0
0          1
L97             CIRCULAR     0.6            0          0
0          1
L98             CIRCULAR     0.375          0          0
0          1
CB-102A-1       CIRCULAR     0.102          0          0
0
CB102-A-2       CIRCULAR     0.102          0          0
0
CB-304A-1       CIRCULAR     0.095          0          0
0
CB-304A-2       CIRCULAR     0.095          0          0
0
CB-306A-1       CIRCULAR     0.083          0          0
0
CB-306A-2       CIRCULAR     0.083          0          0
0
CB-310A-1       CIRCULAR     0.083          0          0
0
CB-310A-2       CIRCULAR     0.083          0          0
0
CB-502A-1       CIRCULAR     0.102          0          0
0
CB-504A-1       CIRCULAR     0.075          0          0
0
CB-504A-2       CIRCULAR     0.075          0          0
0
CB-506A-1       CIRCULAR     0.083          0          0
0
CB-506A-2       CIRCULAR     0.083          0          0
0
CB-508A-1       CIRCULAR     0.075          0          0
0
CB-508A-2       CIRCULAR     0.083          0          0
0
CB-512A-1       CIRCULAR     0.075          0          0
0
CB-512A-2       CIRCULAR     0.07           0          0
0

[TRANSECTS]
;;Transect Data in HEC-2 format
;
NC 0.025    0.025    0.013
X1 18mROW           7        4.75     13.25    0.0      0.0
0.0      0.0      0.0
GR 0.3      0        0.15     4.75     0        4.75     0.13
9        0        13.25
GR 0.15     13.25    0.3      18

[LOSSES]
;;Link           Kentry     Kexit      Kavg       Flap Gate
Seepage
;;-------------- ---------- ---------- ---------- ---------- ----
------
L47-2           0          0.4        0          NO         0
L92             0          0.4        0          NO         0

[INFLOWS]
;;Node           Constituent      Time Series      Type
Mfactor  Sfactor  Baseline Pattern
;;-------------- ---------------- ---------------- -------- -----
--- -------- -------- --------
1001            FLOW             1001             FLOW     1.0
1        0
1002            FLOW             1002             FLOW     1.0
1        0
1004            FLOW             1004             FLOW     1.0
1        0
1005            FLOW             1005             FLOW     1.0
1        0
1006            FLOW             1006             FLOW     1.0
1        0
1008            FLOW             1008             FLOW     1.0
1        0
1009            FLOW             1009             FLOW     1.0
1        0
1010            FLOW             1010             FLOW     1.0
1        0
1011            FLOW             1011             FLOW     1.0
1        0
1012A           FLOW             1012A            FLOW     1.0
1
1012B           FLOW             1012B            FLOW     1.0
1
1013            FLOW             1013             FLOW     1.0
1
1014            FLOW             1014             FLOW     1.0
1        0
1015            FLOW             1015             FLOW     1.0
1        0
1016            FLOW             1016             FLOW     1.0
1        0
1017            FLOW             1017             FLOW     1.0
1        0
1018            FLOW             1018             FLOW     1.0
1        0
1020            FLOW             1020             FLOW     1.0
1        0
1022            FLOW             1022             FLOW     1.0
1        0
1023            FLOW             1023             FLOW     1.0
1        0
1025            FLOW             1025             FLOW     1.0
1        0
1026            FLOW             1026             FLOW     1.0
1        0
1027            FLOW             1027             FLOW     1.0
1        0
1028            FLOW             1028             FLOW     1.0
1        0
1030            FLOW             1030             FLOW     1.0
1        0
1031            FLOW             1031             FLOW     1.0
1        0
1034            FLOW             1034             FLOW     1.0
1        0
1035            FLOW             1035             FLOW     1.0
1        0
1036            FLOW             1036             FLOW     1.0
1        0
1038            FLOW             1038             FLOW     1.0
1        0
1039            FLOW             1039             FLOW     1.0
1        0
1043            FLOW             1043             FLOW     1.0
1        0
1044            FLOW             1044             FLOW     1.0
1        0
1045            FLOW             1045             FLOW     1.0
1        0
1046            FLOW             1046             FLOW     1.0
1        0
1047            FLOW             1047             FLOW     1.0
1        0
1048A           FLOW             1048A            FLOW     1.0
1
1051            FLOW             1051             FLOW     1.0
1        0
1053            FLOW             1053             FLOW     1.0
1        0
2000            FLOW             2000             FLOW     1.0
1
2001            FLOW             2001             FLOW     1.0
1
2004            FLOW             2004             FLOW     1.0
1

[CURVES]
;;Name           Type       X-Value    Y-Value
;;-------------- ---------- ---------- ----------
Curve1          Storage    0          0
Curve1                     1.38       0
Curve1                     1.52       93.1

Curve2          Storage    0          0
Curve2                     1.38       0
Curve2                     1.58       177.9

Curve3          Storage    0          0
Curve3                     1.38       0
Curve3                     1.49       96.1

Curve4          Storage    0          0
Curve4                     1.38       0
Curve4                     1.49       87.7

Curve5          Storage    0          0
Curve5                     1.38       0
Curve5                     1.57       287.8

Curve6          Storage    0          0
Curve6                     1.38       0
Curve6                     1.49       87.1

Curve7          Storage    0          0
Curve7                     1.38       0
Curve7                     1.58       258.5

Curve8          Storage    0          0
Curve8                     1.38       0
Curve8                     1.54       165.2

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
1001                       0:00       0
1001                       0:10       0
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1001	0:20	0
1001	0:30	0.001
1001	0:40	0.002
1001	0:50	0.017
1001	1:00	0.022
1001	1:10	0.022
1001	1:20	0.022
1001	1:30	0.022
1001	1:40	0.012
1001	1:50	0.008
1001	2:00	0.005
1001	2:10	0.004
1001	2:20	0.003
1001	2:30	0.003
1001	2:40	0.002
1001	2:50	0.002
1001	3:00	0.002
1001	3:10	0.002
1001	3:20	0.002
1001	3:30	0.001
1001	3:40	0.001
1001	3:50	0.001
1001	4:00	0.001
1001	4:10	0.001
1001	4:20	0.001
1001	4:30	0.001
1001	4:40	0.001
1001	4:50	0.001
1001	5:00	0
1001	5:10	0
1001	5:20	0
1001	5:30	0
1001	5:40	0
1001	5:50	0
1001	6:00	0
1001	6:10	0
1001	6:20	0
1001	6:30	0
1001	6:40	0
1001	6:50	0
1001	7:00	0
1001	7:10	0
1001	7:20	0
1001	7:30	0
1001	7:40	0
1001	7:50	0
1001	8:00	0
1001	8:10	0
1001	8:20	0
1001	8:30	0
1001	8:40	0
1001	8:50	0
1001	9:00	0
1001	9:10	0
1001	9:20	0
1001	9:30	0
1001	9:40	0
1001	9:50	0
1001	10:00	0
1001	10:10	0
1001	10:20	0
1001	10:30	0
1001	10:40	0
1001	10:50	0
1001	11:00	0
1001	11:10	0
1001	11:20	0
1001	11:30	0
1001	11:40	0
1001	11:50	0
1001	12:00	0
1001	12:10	0
1001	12:20	0
1001	12:30	0
1001	12:40	0
1001	12:50	0
1001	13:00	0
1001	13:10	0

1002	0:00	0
1002	0:10	0
1002	0:20	0.001
1002	0:30	0.005
1002	0:40	0.011
1002	0:50	0.022
1002	1:00	0.044
1002	1:10	0.044
1002	1:20	0.039
1002	1:30	0.033
1002	1:40	0.025
1002	1:50	0.022
1002	2:00	0.017
1002	2:10	0.014
1002	2:20	0.012
1002	2:30	0.011
1002	2:40	0.009
1002	2:50	0.008
1002	3:00	0.008
1002	3:10	0.007
1002	3:20	0.005
1002	3:30	0.005
1002	3:40	0.004
1002	3:50	0.003
1002	4:00	0.003
1002	4:10	0.002
1002	4:20	0.002
1002	4:30	0.002
1002	4:40	0.002
1002	4:50	0.001
1002	5:00	0.001
1002	5:10	0.001
1002	5:20	0.001
1002	5:30	0.001
1002	5:40	0.001
1002	5:50	0.001
1002	6:00	0.001
1002	6:10	0.001
1002	6:20	0.001
1002	6:30	0.001
1002	6:40	0.001
1002	6:50	0.001
1002	7:00	0.001
1002	7:10	0.001
1002	7:20	0.001
1002	7:30	0.001
1002	7:40	0.001
1002	7:50	0.001
1002	8:00	0.001
1002	8:10	0
1002	8:20	0
1002	8:30	0
1002	8:40	0
1002	8:50	0
1002	9:00	0
1002	9:10	0
1002	9:20	0
1002	9:30	0
1002	9:40	0
1002	9:50	0
1002	10:00	0
1002	10:10	0
1002	10:20	0
1002	10:30	0
1002	10:40	0
1002	10:50	0
1002	11:00	0
1002	11:10	0
1002	11:20	0
1002	11:30	0
1002	11:40	0
1002	11:50	0
1002	12:00	0
1002	12:10	0
1002	12:20	0
1002	12:30	0
1002	12:40	0
1002	12:50	0
1002	13:00	0
1002	13:10	0

1004	0:00	0
1004	0:10	0
1004	0:20	0.002
1004	0:30	0.006
1004	0:40	0.014
1004	0:50	0.033
1004	1:00	0.044
1004	1:10	0.042
1004	1:20	0.024
1004	1:30	0.016
1004	1:40	0.01
1004	1:50	0.008
1004	2:00	0.006
1004	2:10	0.005
1004	2:20	0.005
1004	2:30	0.004
1004	2:40	0.004
1004	2:50	0.004
1004	3:00	0.003
1004	3:10	0.003
1004	3:20	0.002
1004	3:30	0.001
1004	3:40	0.001
1004	3:50	0.001
1004	4:00	0.001
1004	4:10	0.001
1004	4:20	0.001
1004	4:30	0.001
1004	4:40	0.001
1004	4:50	0.001
1004	5:00	0.001
1004	5:10	0
1004	5:20	0
1004	5:30	0
1004	5:40	0
1004	5:50	0
1004	6:00	0
1004	6:10	0
1004	6:20	0
1004	6:30	0
1004	6:40	0
1004	6:50	0
1004	7:00	0
1004	7:10	0
1004	7:20	0
1004	7:30	0
1004	7:40	0
1004	7:50	0
1004	8:00	0
1004	8:10	0
1004	8:20	0
1004	8:30	0
1004	8:40	0
1004	8:50	0
1004	9:00	0
1004	9:10	0
1004	9:20	0
1004	9:30	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1004	9:40	0
1004	9:50	0
1004	10:00	0
1004	10:10	0
1004	10:20	0
1004	10:30	0
1004	10:40	0
1004	10:50	0
1004	11:00	0
1004	11:10	0
1004	11:20	0
1004	11:30	0
1004	11:40	0
1004	11:50	0
1004	12:00	0
1004	12:10	0
1004	12:20	0
1004	12:30	0
1004	12:40	0
1004	12:50	0
1004	13:00	0
1004	13:10	0
1005	0:00	0
1005	0:10	0
1005	0:20	0.001
1005	0:30	0.004
1005	0:40	0.009
1005	0:50	0.024
1005	1:00	0.044
1005	1:10	0.044
1005	1:20	0.034
1005	1:30	0.026
1005	1:40	0.019
1005	1:50	0.015
1005	2:00	0.011
1005	2:10	0.009
1005	2:20	0.008
1005	2:30	0.007
1005	2:40	0.006
1005	2:50	0.005
1005	3:00	0.005
1005	3:10	0.004
1005	3:20	0.004
1005	3:30	0.003
1005	3:40	0.002
1005	3:50	0.002
1005	4:00	0.002
1005	4:10	0.001
1005	4:20	0.001
1005	4:30	0.001
1005	4:40	0.001
1005	4:50	0.001
1005	5:00	0.001
1005	5:10	0.001
1005	5:20	0.001
1005	5:30	0.001
1005	5:40	0.001
1005	5:50	0.001
1005	6:00	0.001
1005	6:10	0.001
1005	6:20	0.001
1005	6:30	0.001
1005	6:40	0
1005	6:50	0
1005	7:00	0
1005	7:10	0
1005	7:20	0
1005	7:30	0
1005	7:40	0
1005	7:50	0
1005	8:00	0
1005	8:10	0
1005	8:20	0
1005	8:30	0
1005	8:40	0
1005	8:50	0
1005	9:00	0
1005	9:10	0
1005	9:20	0
1005	9:30	0
1005	9:40	0
1005	9:50	0
1005	10:00	0
1005	10:10	0
1005	10:20	0
1005	10:30	0
1005	10:40	0
1005	10:50	0
1005	11:00	0
1005	11:10	0
1005	11:20	0
1005	11:30	0
1005	11:40	0
1005	11:50	0
1005	12:00	0
1005	12:10	0
1005	12:20	0
1005	12:30	0
1005	12:40	0
1005	12:50	0
1005	13:00	0
1005	13:10	0
1006	0:00	0
1006	0:10	0
1006	0:20	0.004
1006	0:30	0.015
1006	0:40	0.034
1006	0:50	0.095
1006	1:00	0.11
1006	1:10	0.095
1006	1:20	0.063
1006	1:30	0.034
1006	1:40	0.019
1006	1:50	0.017
1006	2:00	0.012
1006	2:10	0.011
1006	2:20	0.01
1006	2:30	0.009
1006	2:40	0.008
1006	2:50	0.007
1006	3:00	0.007
1006	3:10	0.005
1006	3:20	0.004
1006	3:30	0.003
1006	3:40	0.002
1006	3:50	0.002
1006	4:00	0.002
1006	4:10	0.002
1006	4:20	0.002
1006	4:30	0.001
1006	4:40	0.001
1006	4:50	0.001
1006	5:00	0.001
1006	5:10	0.001
1006	5:20	0.001
1006	5:30	0.001
1006	5:40	0.001
1006	5:50	0.001
1006	6:00	0.001
1006	6:10	0.001
1006	6:20	0.001
1006	6:30	0.001
1006	6:40	0.001
1006	6:50	0.001
1006	7:00	0.001
1006	7:10	0.001
1006	7:20	0.001
1006	7:30	0.001
1006	7:40	0.001
1006	7:50	0
1006	8:00	0
1006	8:10	0
1006	8:20	0
1006	8:30	0
1006	8:40	0
1006	8:50	0
1006	9:00	0
1006	9:10	0
1006	9:20	0
1006	9:30	0
1006	9:40	0
1006	9:50	0
1006	10:00	0
1006	10:10	0
1006	10:20	0
1006	10:30	0
1006	10:40	0
1006	10:50	0
1006	11:00	0
1006	11:10	0
1006	11:20	0
1006	11:30	0
1006	11:40	0
1006	11:50	0
1006	12:00	0
1006	12:10	0
1006	12:20	0
1006	12:30	0
1006	12:40	0
1006	12:50	0
1006	13:00	0
1006	13:10	0
1008	0:00	0
1008	0:10	0
1008	0:20	0.001
1008	0:30	0.006
1008	0:40	0.011
1008	0:50	0.044
1008	1:00	0.066
1008	1:10	0.066
1008	1:20	0.065
1008	1:30	0.053
1008	1:40	0.027
1008	1:50	0.018
1008	2:00	0.011
1008	2:10	0.009
1008	2:20	0.007
1008	2:30	0.007
1008	2:40	0.006
1008	2:50	0.005
1008	3:00	0.005
1008	3:10	0.004
1008	3:20	0.003
1008	3:30	0.003
1008	3:40	0.002
1008	3:50	0.002
1008	4:00	0.002
1008	4:10	0.001
1008	4:20	0.001
1008	4:30	0.001
1008	4:40	0.001
1008	4:50	0.001
1008	5:00	0.001
1008	5:10	0.001
1008	5:20	0.001

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1008	5:30	0.001
1008	5:40	0.001
1008	5:50	0.001
1008	6:00	0.001
1008	6:10	0
1008	6:20	0
1008	6:30	0
1008	6:40	0
1008	6:50	0
1008	7:00	0
1008	7:10	0
1008	7:20	0
1008	7:30	0
1008	7:40	0
1008	7:50	0
1008	8:00	0
1008	8:10	0
1008	8:20	0
1008	8:30	0
1008	8:40	0
1008	8:50	0
1008	9:00	0
1008	9:10	0
1008	9:20	0
1008	9:30	0
1008	9:40	0
1008	9:50	0
1008	10:00	0
1008	10:10	0
1008	10:20	0
1008	10:30	0
1008	10:40	0
1008	10:50	0
1008	11:00	0
1008	11:10	0
1008	11:20	0
1008	11:30	0
1008	11:40	0
1008	11:50	0
1008	12:00	0
1008	12:10	0
1008	12:20	0
1008	12:30	0
1008	12:40	0
1008	12:50	0
1008	13:00	0
1008	13:10	0
1009	0:00	0
1009	0:10	0
1009	0:20	0.001
1009	0:30	0.004
1009	0:40	0.008
1009	0:50	0.044
1009	1:00	0.043
1009	1:10	0.03
1009	1:20	0.016
1009	1:30	0.012
1009	1:40	0.006
1009	1:50	0.006
1009	2:00	0.003
1009	2:10	0.003
1009	2:20	0.003
1009	2:30	0.003
1009	2:40	0.002
1009	2:50	0.002
1009	3:00	0.002
1009	3:10	0.001
1009	3:20	0.001
1009	3:30	0.001
1009	3:40	0.001
1009	3:50	0.001
1009	4:00	0.001
1009	4:10	0.001
1009	4:20	0
1009	4:30	0
1009	4:40	0
1009	4:50	0
1009	5:00	0
1009	5:10	0
1009	5:20	0
1009	5:30	0
1009	5:40	0
1009	5:50	0
1009	6:00	0
1009	6:10	0
1009	6:20	0
1009	6:30	0
1009	6:40	0
1009	6:50	0
1009	7:00	0
1009	7:10	0
1009	7:20	0
1009	7:30	0
1009	7:40	0
1009	7:50	0
1009	8:00	0
1009	8:10	0
1009	8:20	0
1009	8:30	0
1009	8:40	0
1009	8:50	0
1009	9:00	0
1009	9:10	0
1009	9:20	0
1009	9:30	0
1009	9:40	0
1009	9:50	0
1009	10:00	0

1009	10:10	0
1009	10:20	0
1009	10:30	0
1009	10:40	0
1009	10:50	0
1009	11:00	0
1009	11:10	0
1009	11:20	0
1009	11:30	0
1009	11:40	0
1009	11:50	0
1009	12:00	0
1009	12:10	0
1009	12:20	0
1009	12:30	0
1009	12:40	0
1009	12:50	0
1009	13:00	0
1009	13:10	0
1010	0:00	0
1010	0:10	0
1010	0:20	0.001
1010	0:30	0.009
1010	0:40	0.021
1010	0:50	0.052
1010	1:00	0.054
1010	1:10	0.049
1010	1:20	0.047
1010	1:30	0.028
1010	1:40	0.016
1010	1:50	0.013
1010	2:00	0.01
1010	2:10	0.008
1010	2:20	0.007
1010	2:30	0.006
1010	2:40	0.006
1010	2:50	0.005
1010	3:00	0.005
1010	3:10	0.004
1010	3:20	0.003
1010	3:30	0.002
1010	3:40	0.002
1010	3:50	0.002
1010	4:00	0.001
1010	4:10	0.001
1010	4:20	0.001
1010	4:30	0.001
1010	4:40	0.001
1010	4:50	0.001
1010	5:00	0.001
1010	5:10	0.001
1010	5:20	0.001
1010	5:30	0.001
1010	5:40	0.001
1010	5:50	0.001
1010	6:00	0.001
1010	6:10	0.001
1010	6:20	0.001
1010	6:30	0.001
1010	6:40	0
1010	6:50	0
1010	7:00	0
1010	7:10	0
1010	7:20	0
1010	7:30	0
1010	7:40	0
1010	7:50	0
1010	8:00	0
1010	8:10	0
1010	8:20	0
1010	8:30	0
1010	8:40	0
1010	8:50	0
1010	9:00	0
1010	9:10	0
1010	9:20	0
1010	9:30	0
1010	9:40	0
1010	9:50	0
1010	10:00	0
1010	10:10	0
1010	10:20	0
1010	10:30	0
1010	10:40	0
1010	10:50	0
1010	11:00	0
1010	11:10	0
1010	11:20	0
1010	11:30	0
1010	11:40	0
1010	11:50	0
1010	12:00	0
1010	12:10	0
1010	12:20	0
1010	12:30	0
1010	12:40	0
1010	12:50	0
1010	13:00	0
1010	13:10	0
1011	0:00	0
1011	0:10	0
1011	0:20	0
1011	0:30	0.002
1011	0:40	0.005
1011	0:50	0.028
1011	1:00	0.032
1011	1:10	0.027

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1011	1:20	0.018
1011	1:30	0.008
1011	1:40	0.004
1011	1:50	0.003
1011	2:00	0.003
1011	2:10	0.002
1011	2:20	0.002
1011	2:30	0.002
1011	2:40	0.002
1011	2:50	0.001
1011	3:00	0.001
1011	3:10	0.001
1011	3:20	0.001
1011	3:30	0.001
1011	3:40	0.001
1011	3:50	0.001
1011	4:00	0.001
1011	4:10	0
1011	4:20	0
1011	4:30	0
1011	4:40	0
1011	4:50	0
1011	5:00	0
1011	5:10	0
1011	5:20	0
1011	5:30	0
1011	5:40	0
1011	5:50	0
1011	6:00	0
1011	6:10	0
1011	6:20	0
1011	6:30	0
1011	6:40	0
1011	6:50	0
1011	7:00	0
1011	7:10	0
1011	7:20	0
1011	7:30	0
1011	7:40	0
1011	7:50	0
1011	8:00	0
1011	8:10	0
1011	8:20	0
1011	8:30	0
1011	8:40	0
1011	8:50	0
1011	9:00	0
1011	9:10	0
1011	9:20	0
1011	9:30	0
1011	9:40	0
1011	9:50	0
1011	10:00	0
1011	10:10	0
1011	10:20	0
1011	10:30	0
1011	10:40	0
1011	10:50	0
1011	11:00	0
1011	11:10	0
1011	11:20	0
1011	11:30	0
1011	11:40	0
1011	11:50	0
1011	12:00	0
1011	12:10	0
1011	12:20	0
1011	12:30	0
1011	12:40	0
1011	12:50	0
1011	13:00	0
1011	13:10	0

;Design inflow to MH1012 (1012A) from Oct 2007 Ph1 Subdivision design

1012A	0:00	0
1012A	0:10	0
1012A	0:20	0
1012A	0:30	0
1012A	0:40	0.001
1012A	0:50	0.005
1012A	1:00	0.018
1012A	1:10	0.022
1012A	1:20	0.022
1012A	1:30	0.022
1012A	1:40	0.021
1012A	1:50	0.018
1012A	2:00	0.016
1012A	2:10	0.014
1012A	2:20	0.012
1012A	2:30	0.01
1012A	2:40	0.009
1012A	2:50	0.008
1012A	3:00	0.008
1012A	3:10	0.007
1012A	3:20	0.006
1012A	3:30	0.006
1012A	3:40	0.006
1012A	3:50	0.005
1012A	4:00	0.005
1012A	4:10	0.005
1012A	4:20	0.005
1012A	4:30	0.004
1012A	4:40	0.004
1012A	4:50	0.004
1012A	5:00	0.004
1012A	5:10	0.004
1012A	5:20	0.003
1012A	5:30	0.003
1012A	5:40	0.003
1012A	5:50	0.003
1012A	6:00	0.003
1012A	6:10	0.003
1012A	6:20	0.003
1012A	6:30	0.003
1012A	6:40	0.003
1012A	6:50	0.003
1012A	7:00	0.003
1012A	7:10	0.002
1012A	7:20	0.002
1012A	7:30	0.002
1012A	7:40	0.002
1012A	7:50	0.002
1012A	8:00	0.002
1012A	8:10	0.002
1012A	8:20	0.002
1012A	8:30	0.002
1012A	8:40	0.002
1012A	8:50	0.002
1012A	9:00	0.002
1012A	9:10	0.002
1012A	9:20	0.002
1012A	9:30	0.002
1012A	9:40	0.002
1012A	9:50	0.002
1012A	10:00	0.002
1012A	10:10	0.002
1012A	10:20	0.002
1012A	10:30	0.002
1012A	10:40	0.002
1012A	10:50	0.002
1012A	11:00	0.002
1012A	11:10	0.002
1012A	11:20	0.001
1012A	11:30	0.001
1012A	11:40	0.001
1012A	11:50	0.001
1012A	12:00	0.001
1012A	12:10	0.001
1012A	12:20	0.001
1012A	12:30	0.001
1012A	12:40	0.001
1012A	12:50	0.001
1012A	13:00	0.001
1012A	13:10	0.001

1012B	0:00	0
1012B	0:10	0
1012B	0:20	0
1012B	0:30	0
1012B	0:40	0.001
1012B	0:50	0.005
1012B	1:00	0.014
1012B	1:10	0.02
1012B	1:20	0.02
1012B	1:30	0.018
1012B	1:40	0.015
1012B	1:50	0.013
1012B	2:00	0.012
1012B	2:10	0.01
1012B	2:20	0.009
1012B	2:30	0.008
1012B	2:40	0.008
1012B	2:50	0.007
1012B	3:00	0.007
1012B	3:10	0.006
1012B	3:20	0.006
1012B	3:30	0.005
1012B	3:40	0.005
1012B	3:50	0.005
1012B	4:00	0.005
1012B	4:10	0.004
1012B	4:20	0.004
1012B	4:30	0.004
1012B	4:40	0.004
1012B	4:50	0.004
1012B	5:00	0.004
1012B	5:10	0.004
1012B	5:20	0.003
1012B	5:30	0.003
1012B	5:40	0.003
1012B	5:50	0.003
1012B	6:00	0.003
1012B	6:10	0.003
1012B	6:20	0.003
1012B	6:30	0.003
1012B	6:40	0.003
1012B	6:50	0.003
1012B	7:00	0.003
1012B	7:10	0.003
1012B	7:20	0.002
1012B	7:30	0.002
1012B	7:40	0.002
1012B	7:50	0.002
1012B	8:00	0.002
1012B	8:10	0.002
1012B	8:20	0.002
1012B	8:30	0.002
1012B	8:40	0.002
1012B	8:50	0.002
1012B	9:00	0.002
1012B	9:10	0.002
1012B	9:20	0.002
1012B	9:30	0.002
1012B	9:40	0.002
1012B	9:50	0.002
1012B	10:00	0.002
1012B	10:10	0.002

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1012B	10:20	0.002
1012B	10:30	0.002
1012B	10:40	0.002
1012B	10:50	0.002
1012B	11:00	0.002
1012B	11:10	0.002
1012B	11:20	0.002
1012B	11:30	0.002
1012B	11:40	0.002
1012B	11:50	0.002
1012B	12:00	0.001
1012B	12:10	0.001
1012B	12:20	0.001
1012B	12:30	0.001
1012B	12:40	0.001
1012B	12:50	0.001
1012B	13:00	0.001
1012B	13:10	0.001
;Design inflow to MH1013 from Oct 2007 Ph1 Subdivision design		
1013	0:00	0
1013	0:10	0
1013	0:20	0.001
1013	0:30	0.028
1013	0:40	0.098
1013	0:50	0.315
1013	1:00	0.913
1013	1:10	1.085
1013	1:20	1.05
1013	1:30	0.959
1013	1:40	0.773
1013	1:50	0.563
1013	2:00	0.42
1013	2:10	0.319
1013	2:20	0.252
1013	2:30	0.208
1013	2:40	0.178
1013	2:50	0.157
1013	3:00	0.146
1013	3:10	0.136
1013	3:20	0.114
1013	3:30	0.089
1013	3:40	0.069
1013	3:50	0.054
1013	4:00	0.043
1013	4:10	0.035
1013	4:20	0.03
1013	4:30	0.025
1013	4:40	0.022
1013	4:50	0.019
1013	5:00	0.017
1013	5:10	0.015
1013	5:20	0.013
1013	5:30	0.012
1013	5:40	0.011
1013	5:50	0.011
1013	6:00	0.01
1013	6:10	0.01
1013	6:20	0.009
1013	6:30	0.009
1013	6:40	0.008
1013	6:50	0.008
1013	7:00	0.008
1013	7:10	0.008
1013	7:20	0.007
1013	7:30	0.007
1013	7:40	0.007
1013	7:50	0.007
1013	8:00	0.006
1013	8:10	0.006
1013	8:20	0.006
1013	8:30	0.006
1013	8:40	0.006
1013	8:50	0.006
1013	9:00	0.006
1013	9:10	0.005
1013	9:20	0.005
1013	9:30	0.005
1013	9:40	0.005
1013	9:50	0.005
1013	10:00	0.005
1013	10:10	0.005
1013	10:20	0.005
1013	10:30	0.005
1013	10:40	0.004
1013	10:50	0.004
1013	11:00	0.004
1013	11:10	0.004
1013	11:20	0.004
1013	11:30	0.004
1013	11:40	0.004
1013	11:50	0.004
1013	12:00	0.004
1013	12:10	0.004
1013	12:20	0.004
1013	12:30	0.004
1013	12:40	0.004
1013	12:50	0.004
1013	13:00	0.004
1013	13:10	0.003
1014	0:00	0
1014	0:10	0
1014	0:20	0
1014	0:30	0.002
1014	0:40	0.005
1014	0:50	0.022
1014	1:00	0.022
1014	1:10	0.022
1014	1:20	0.022
1014	1:30	0.022
1014	1:40	0.022
1014	1:50	0.021
1014	2:00	0.02
1014	2:10	0.017
1014	2:20	0.015
1014	2:30	0.013
1014	2:40	0.012
1014	2:50	0.01
1014	3:00	0.009
1014	3:10	0.008
1014	3:20	0.007
1014	3:30	0.006
1014	3:40	0.005
1014	3:50	0.005
1014	4:00	0.004
1014	4:10	0.003
1014	4:20	0.003
1014	4:30	0.003
1014	4:40	0.002
1014	4:50	0.002
1014	5:00	0.002
1014	5:10	0.002
1014	5:20	0.001
1014	5:30	0.001
1014	5:40	0.001
1014	5:50	0.001
1014	6:00	0.001
1014	6:10	0.001
1014	6:20	0.001
1014	6:30	0.001
1014	6:40	0.001
1014	6:50	0.001
1014	7:00	0.001
1014	7:10	0.001
1014	7:20	0.001
1014	7:30	0
1014	7:40	0
1014	7:50	0
1014	8:00	0
1014	8:10	0
1014	8:20	0
1014	8:30	0
1014	8:40	0
1014	8:50	0
1014	9:00	0
1014	9:10	0
1014	9:20	0
1014	9:30	0
1014	9:40	0
1014	9:50	0
1014	10:00	0
1014	10:10	0
1014	10:20	0
1014	10:30	0
1014	10:40	0
1014	10:50	0
1014	11:00	0
1014	11:10	0
1014	11:20	0
1014	11:30	0
1014	11:40	0
1014	11:50	0
1014	12:00	0
1014	12:10	0
1014	12:20	0
1014	12:30	0
1014	12:40	0
1014	12:50	0
1014	13:00	0
1014	13:10	0
1015	0:00	0
1015	0:10	0
1015	0:20	0.001
1015	0:30	0.004
1015	0:40	0.011
1015	0:50	0.044
1015	1:00	0.044
1015	1:10	0.044
1015	1:20	0.044
1015	1:30	0.041
1015	1:40	0.036
1015	1:50	0.031
1015	2:00	0.027
1015	2:10	0.022
1015	2:20	0.018
1015	2:30	0.015
1015	2:40	0.013
1015	2:50	0.011
1015	3:00	0.01
1015	3:10	0.008
1015	3:20	0.007
1015	3:30	0.006
1015	3:40	0.005
1015	3:50	0.004
1015	4:00	0.004
1015	4:10	0.003
1015	4:20	0.003
1015	4:30	0.002
1015	4:40	0.002
1015	4:50	0.002
1015	5:00	0.002
1015	5:10	0.001
1015	5:20	0.001
1015	5:30	0.001
1015	5:40	0.001
1015	5:50	0.001

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1015	6:00	0.001
1015	6:10	0.001
1015	6:20	0.001
1015	6:30	0.001
1015	6:40	0.001
1015	6:50	0.001
1015	7:00	0.001
1015	7:10	0.001
1015	7:20	0.001
1015	7:30	0.001
1015	7:40	0.001
1015	7:50	0.001
1015	8:00	0.001
1015	8:10	0.001
1015	8:20	0.001
1015	8:30	0.001
1015	8:40	0
1015	8:50	0
1015	9:00	0
1015	9:10	0
1015	9:20	0
1015	9:30	0
1015	9:40	0
1015	9:50	0
1015	10:00	0
1015	10:10	0
1015	10:20	0
1015	10:30	0
1015	10:40	0
1015	10:50	0
1015	11:00	0
1015	11:10	0
1015	11:20	0
1015	11:30	0
1015	11:40	0
1015	11:50	0
1015	12:00	0
1015	12:10	0
1015	12:20	0
1015	12:30	0
1015	12:40	0
1015	12:50	0
1015	13:00	0
1015	13:10	0
1016	0:00	0
1016	0:10	0
1016	0:20	0.001
1016	0:30	0.006
1016	0:40	0.008
1016	0:50	0.022
1016	1:00	0.044
1016	1:10	0.044
1016	1:20	0.044
1016	1:30	0.044
1016	1:40	0.032
1016	1:50	0.021
1016	2:00	0.012
1016	2:10	0.01
1016	2:20	0.007
1016	2:30	0.007
1016	2:40	0.006
1016	2:50	0.006
1016	3:00	0.006
1016	3:10	0.005
1016	3:20	0.004
1016	3:30	0.003
1016	3:40	0.003
1016	3:50	0.002
1016	4:00	0.002
1016	4:10	0.002
1016	4:20	0.001
1016	4:30	0.001
1016	4:40	0.001
1016	4:50	0.001
1016	5:00	0.001
1016	5:10	0.001
1016	5:20	0.001
1016	5:30	0.001
1016	5:40	0.001
1016	5:50	0.001
1016	6:00	0.001
1016	6:10	0.001
1016	6:20	0.001
1016	6:30	0.001
1016	6:40	0
1016	6:50	0
1016	7:00	0
1016	7:10	0
1016	7:20	0
1016	7:30	0
1016	7:40	0
1016	7:50	0
1016	8:00	0
1016	8:10	0
1016	8:20	0
1016	8:30	0
1016	8:40	0
1016	8:50	0
1016	9:00	0
1016	9:10	0
1016	9:20	0
1016	9:30	0
1016	9:40	0
1016	9:50	0
1016	10:00	0
1016	10:10	0
1016	10:20	0
1016	10:30	0
1016	10:40	0
1016	10:50	0
1016	11:00	0
1016	11:10	0
1016	11:20	0
1016	11:30	0
1016	11:40	0
1016	11:50	0
1016	12:00	0
1016	12:10	0
1016	12:20	0
1016	12:30	0
1016	12:40	0
1016	12:50	0
1016	13:00	0
1016	13:10	0
1017	0:00	0
1017	0:10	0
1017	0:20	0.001
1017	0:30	0.003
1017	0:40	0.008
1017	0:50	0.022
1017	1:00	0.022
1017	1:10	0.021
1017	1:20	0.02
1017	1:30	0.016
1017	1:40	0.012
1017	1:50	0.009
1017	2:00	0.007
1017	2:10	0.006
1017	2:20	0.005
1017	2:30	0.004
1017	2:40	0.004
1017	2:50	0.003
1017	3:00	0.003
1017	3:10	0.003
1017	3:20	0.002
1017	3:30	0.002
1017	3:40	0.001
1017	3:50	0.001
1017	4:00	0.001
1017	4:10	0.001
1017	4:20	0.001
1017	4:30	0.001
1017	4:40	0.001
1017	4:50	0
1017	5:00	0
1017	5:10	0
1017	5:20	0
1017	5:30	0
1017	5:40	0
1017	5:50	0
1017	6:00	0
1017	6:10	0
1017	6:20	0
1017	6:30	0
1017	6:40	0
1017	6:50	0
1017	7:00	0
1017	7:10	0
1017	7:20	0
1017	7:30	0
1017	7:40	0
1017	7:50	0
1017	8:00	0
1017	8:10	0
1017	8:20	0
1017	8:30	0
1017	8:40	0
1017	8:50	0
1017	9:00	0
1017	9:10	0
1017	9:20	0
1017	9:30	0
1017	9:40	0
1017	9:50	0
1017	10:00	0
1017	10:10	0
1017	10:20	0
1017	10:30	0
1017	10:40	0
1017	10:50	0
1017	11:00	0
1017	11:10	0
1017	11:20	0
1017	11:30	0
1017	11:40	0
1017	11:50	0
1017	12:00	0
1017	12:10	0
1017	12:20	0
1017	12:30	0
1017	12:40	0
1017	12:50	0
1017	13:00	0
1017	13:10	0
1018	0:00	0
1018	0:10	0
1018	0:20	0.001
1018	0:30	0.007
1018	0:40	0.012
1018	0:50	0.022
1018	1:00	0.044
1018	1:10	0.044
1018	1:20	0.039
1018	1:30	0.032
1018	1:40	0.02

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1018	1:50	0.017
1018	2:00	0.011
1018	2:10	0.009
1018	2:20	0.007
1018	2:30	0.007
1018	2:40	0.006
1018	2:50	0.005
1018	3:00	0.005
1018	3:10	0.004
1018	3:20	0.003
1018	3:30	0.003
1018	3:40	0.002
1018	3:50	0.002
1018	4:00	0.002
1018	4:10	0.001
1018	4:20	0.001
1018	4:30	0.001
1018	4:40	0.001
1018	4:50	0.001
1018	5:00	0.001
1018	5:10	0.001
1018	5:20	0.001
1018	5:30	0.001
1018	5:40	0.001
1018	5:50	0.001
1018	6:00	0.001
1018	6:10	0
1018	6:20	0
1018	6:30	0
1018	6:40	0
1018	6:50	0
1018	7:00	0
1018	7:10	0
1018	7:20	0
1018	7:30	0
1018	7:40	0
1018	7:50	0
1018	8:00	0
1018	8:10	0
1018	8:20	0
1018	8:30	0
1018	8:40	0
1018	8:50	0
1018	9:00	0
1018	9:10	0
1018	9:20	0
1018	9:30	0
1018	9:40	0
1018	9:50	0
1018	10:00	0
1018	10:10	0
1018	10:20	0
1018	10:30	0
1018	10:40	0
1018	10:50	0
1018	11:00	0
1018	11:10	0
1018	11:20	0
1018	11:30	0
1018	11:40	0
1018	11:50	0
1018	12:00	0
1018	12:10	0
1018	12:20	0
1018	12:30	0
1018	12:40	0
1018	12:50	0
1018	13:00	0
1018	13:10	0
1020	0:00	0
1020	0:10	0
1020	0:20	0.002
1020	0:30	0.008
1020	0:40	0.019
1020	0:50	0.022
1020	1:00	0.022
1020	1:10	0.022
1020	1:20	0.022
1020	1:30	0.018
1020	1:40	0.012
1020	1:50	0.01
1020	2:00	0.008
1020	2:10	0.007
1020	2:20	0.006
1020	2:30	0.006
1020	2:40	0.005
1020	2:50	0.005
1020	3:00	0.004
1020	3:10	0.004
1020	3:20	0.003
1020	3:30	0.002
1020	3:40	0.002
1020	3:50	0.002
1020	4:00	0.001
1020	4:10	0.001
1020	4:20	0.001
1020	4:30	0.001
1020	4:40	0.001
1020	4:50	0.001
1020	5:00	0.001
1020	5:10	0.001
1020	5:20	0.001
1020	5:30	0.001
1020	5:40	0.001
1020	5:50	0.001
1020	6:00	0.001
1020	6:10	0.001
1020	6:20	0.001
1020	6:30	0
1020	6:40	0
1020	6:50	0
1020	7:00	0
1020	7:10	0
1020	7:20	0
1020	7:30	0
1020	7:40	0
1020	7:50	0
1020	8:00	0
1020	8:10	0
1020	8:20	0
1020	8:30	0
1020	8:40	0
1020	8:50	0
1020	9:00	0
1020	9:10	0
1020	9:20	0
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1020	9:40	0
1020	9:50	0
1020	10:00	0
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1020	10:30	0
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1020	11:00	0
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1020	11:40	0
1020	11:50	0
1020	12:00	0
1020	12:10	0
1020	12:20	0
1020	12:30	0
1020	12:40	0
1020	12:50	0
1020	13:00	0
1020	13:10	0
1022	0:00	0
1022	0:10	0
1022	0:20	0.003
1022	0:30	0.012
1022	0:40	0.026
1022	0:50	0.054
1022	1:00	0.066
1022	1:10	0.066
1022	1:20	0.066
1022	1:30	0.046
1022	1:40	0.022
1022	1:50	0.018
1022	2:00	0.014
1022	2:10	0.011
1022	2:20	0.01
1022	2:30	0.009
1022	2:40	0.008
1022	2:50	0.007
1022	3:00	0.007
1022	3:10	0.005
1022	3:20	0.004
1022	3:30	0.003
1022	3:40	0.003
1022	3:50	0.002
1022	4:00	0.002
1022	4:10	0.002
1022	4:20	0.002
1022	4:30	0.001
1022	4:40	0.001
1022	4:50	0.001
1022	5:00	0.001
1022	5:10	0.001
1022	5:20	0.001
1022	5:30	0.001
1022	5:40	0.001
1022	5:50	0.001
1022	6:00	0.001
1022	6:10	0.001
1022	6:20	0.001
1022	6:30	0.001
1022	6:40	0.001
1022	6:50	0.001
1022	7:00	0.001
1022	7:10	0.001
1022	7:20	0.001
1022	7:30	0.001
1022	7:40	0.001
1022	7:50	0.001
1022	8:00	0
1022	8:10	0
1022	8:20	0
1022	8:30	0
1022	8:40	0
1022	8:50	0
1022	9:00	0
1022	9:10	0
1022	9:20	0
1022	9:30	0
1022	9:40	0
1022	9:50	0
1022	10:00	0
1022	10:10	0
1022	10:20	0
1022	10:30	0
1022	10:40	0
1022	10:50	0
1022	11:00	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1022	11:10	0
1022	11:20	0
1022	11:30	0
1022	11:40	0
1022	11:50	0
1022	12:00	0
1022	12:10	0
1022	12:20	0
1022	12:30	0
1022	12:40	0
1022	12:50	0
1022	13:00	0
1022	13:10	0
1023	0:00	0
1023	0:10	0
1023	0:20	0.002
1023	0:30	0.009
1023	0:40	0.021
1023	0:50	0.099
1023	1:00	0.116
1023	1:10	0.113
1023	1:20	0.102
1023	1:30	0.085
1023	1:40	0.052
1023	1:50	0.037
1023	2:00	0.026
1023	2:10	0.02
1023	2:20	0.016
1023	2:30	0.013
1023	2:40	0.011
1023	2:50	0.01
1023	3:00	0.009
1023	3:10	0.007
1023	3:20	0.006
1023	3:30	0.005
1023	3:40	0.004
1023	3:50	0.003
1023	4:00	0.003
1023	4:10	0.002
1023	4:20	0.002
1023	4:30	0.002
1023	4:40	0.002
1023	4:50	0.001
1023	5:00	0.001
1023	5:10	0.001
1023	5:20	0.001
1023	5:30	0.001
1023	5:40	0.001
1023	5:50	0.001
1023	6:00	0.001
1023	6:10	0.001
1023	6:20	0.001
1023	6:30	0.001
1023	6:40	0.001
1023	6:50	0.001
1023	7:00	0.001
1023	7:10	0.001
1023	7:20	0.001
1023	7:30	0.001
1023	7:40	0.001
1023	7:50	0.001
1023	8:00	0.001
1023	8:10	0
1023	8:20	0
1023	8:30	0
1023	8:40	0
1023	8:50	0
1023	9:00	0
1023	9:10	0
1023	9:20	0
1023	9:30	0
1023	9:40	0
1023	9:50	0
1023	10:00	0
1023	10:10	0
1023	10:20	0
1023	10:30	0
1023	10:40	0
1023	10:50	0
1023	11:00	0
1023	11:10	0
1023	11:20	0
1023	11:30	0
1023	11:40	0
1023	11:50	0
1023	12:00	0
1023	12:10	0
1023	12:20	0
1023	12:30	0
1023	12:40	0
1023	12:50	0
1023	13:00	0
1023	13:10	0
1025	0:00	0
1025	0:10	0
1025	0:20	0.001
1025	0:30	0.003
1025	0:40	0.008
1025	0:50	0.022
1025	1:00	0.022
1025	1:10	0.022
1025	1:20	0.022
1025	1:30	0.019
1025	1:40	0.011
1025	1:50	0.005
1025	2:00	0.004
1025	2:10	0.004
1025	2:20	0.003
1025	2:30	0.003
1025	2:40	0.003
1025	2:50	0.002
1025	3:00	0.002
1025	3:10	0.002
1025	3:20	0.001
1025	3:30	0.001
1025	3:40	0.001
1025	3:50	0.001
1025	4:00	0.001
1025	4:10	0.001
1025	4:20	0.001
1025	4:30	0.001
1025	4:40	0.001
1025	4:50	0.001
1025	5:00	0
1025	5:10	0
1025	5:20	0
1025	5:30	0
1025	5:40	0
1025	5:50	0
1025	6:00	0
1025	6:10	0
1025	6:20	0
1025	6:30	0
1025	6:40	0
1025	6:50	0
1025	7:00	0
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1025	7:20	0
1025	7:30	0
1025	7:40	0
1025	7:50	0
1025	8:00	0
1025	8:10	0
1025	8:20	0
1025	8:30	0
1025	8:40	0
1025	8:50	0
1025	9:00	0
1025	9:10	0
1025	9:20	0
1025	9:30	0
1025	9:40	0
1025	9:50	0
1025	10:00	0
1025	10:10	0
1025	10:20	0
1025	10:30	0
1025	10:40	0
1025	10:50	0
1025	11:00	0
1025	11:10	0
1025	11:20	0
1025	11:30	0
1025	11:40	0
1025	11:50	0
1025	12:00	0
1025	12:10	0
1025	12:20	0
1025	12:30	0
1025	12:40	0
1025	12:50	0
1025	13:00	0
1025	13:10	0
1026	0:00	0
1026	0:10	0
1026	0:20	0.001
1026	0:30	0.005
1026	0:40	0.012
1026	0:50	0.022
1026	1:00	0.022
1026	1:10	0.021
1026	1:20	0.017
1026	1:30	0.012
1026	1:40	0.008
1026	1:50	0.006
1026	2:00	0.005
1026	2:10	0.004
1026	2:20	0.004
1026	2:30	0.003
1026	2:40	0.003
1026	2:50	0.003
1026	3:00	0.003
1026	3:10	0.002
1026	3:20	0.001
1026	3:30	0.001
1026	3:40	0.001
1026	3:50	0.001
1026	4:00	0.001
1026	4:10	0.001
1026	4:20	0.001
1026	4:30	0.001
1026	4:40	0
1026	4:50	0
1026	5:00	0
1026	5:10	0
1026	5:20	0
1026	5:30	0
1026	5:40	0
1026	5:50	0
1026	6:00	0
1026	6:10	0
1026	6:20	0
1026	6:30	0
1026	6:40	0
1026	6:50	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1026	7:00	0
1026	7:10	0
1026	7:20	0
1026	7:30	0
1026	7:40	0
1026	7:50	0
1026	8:00	0
1026	8:10	0
1026	8:20	0
1026	8:30	0
1026	8:40	0
1026	8:50	0
1026	9:00	0
1026	9:10	0
1026	9:20	0
1026	9:30	0
1026	9:40	0
1026	9:50	0
1026	10:00	0
1026	10:10	0
1026	10:20	0
1026	10:30	0
1026	10:40	0
1026	10:50	0
1026	11:00	0
1026	11:10	0
1026	11:20	0
1026	11:30	0
1026	11:40	0
1026	11:50	0
1026	12:00	0
1026	12:10	0
1026	12:20	0
1026	12:30	0
1026	12:40	0
1026	12:50	0
1026	13:00	0
1026	13:10	0
1027	0:00	0
1027	0:10	0
1027	0:20	0.004
1027	0:30	0.014
1027	0:40	0.031
1027	0:50	0.1
1027	1:00	0.11
1027	1:10	0.104
1027	1:20	0.088
1027	1:30	0.051
1027	1:40	0.026
1027	1:50	0.019
1027	2:00	0.013
1027	2:10	0.011
1027	2:20	0.01
1027	2:30	0.009
1027	2:40	0.008
1027	2:50	0.007
1027	3:00	0.006
1027	3:10	0.005
1027	3:20	0.004
1027	3:30	0.003
1027	3:40	0.002
1027	3:50	0.002
1027	4:00	0.002
1027	4:10	0.002
1027	4:20	0.001
1027	4:30	0.001
1027	4:40	0.001
1027	4:50	0.001
1027	5:00	0.001
1027	5:10	0.001
1027	5:20	0.001
1027	5:30	0.001
1027	5:40	0.001
1027	5:50	0.001
1027	6:00	0.001
1027	6:10	0.001
1027	6:20	0.001
1027	6:30	0.001
1027	6:40	0.001
1027	6:50	0.001
1027	7:00	0.001
1027	7:10	0.001
1027	7:20	0
1027	7:30	0
1027	7:40	0
1027	7:50	0
1027	8:00	0
1027	8:10	0
1027	8:20	0
1027	8:30	0
1027	8:40	0
1027	8:50	0
1027	9:00	0
1027	9:10	0
1027	9:20	0
1027	9:30	0
1027	9:40	0
1027	9:50	0
1027	10:00	0
1027	10:10	0
1027	10:20	0
1027	10:30	0
1027	10:40	0
1027	10:50	0
1027	11:00	0
1027	11:10	0
1027	11:20	0
1027	11:30	0
1027	11:40	0
1027	11:50	0
1027	12:00	0
1027	12:10	0
1027	12:20	0
1027	12:30	0
1027	12:40	0
1027	12:50	0
1027	13:00	0
1027	13:10	0
1028	0:00	0
1028	0:10	0
1028	0:20	0.001
1028	0:30	0.004
1028	0:40	0.008
1028	0:50	0.044
1028	1:00	0.044
1028	1:10	0.044
1028	1:20	0.044
1028	1:30	0.036
1028	1:40	0.02
1028	1:50	0.01
1028	2:00	0.006
1028	2:10	0.005
1028	2:20	0.004
1028	2:30	0.004
1028	2:40	0.003
1028	2:50	0.003
1028	3:00	0.003
1028	3:10	0.002
1028	3:20	0.002
1028	3:30	0.001
1028	3:40	0.001
1028	3:50	0.001
1028	4:00	0.001
1028	4:10	0.001
1028	4:20	0.001
1028	4:30	0.001
1028	4:40	0.001
1028	4:50	0.001
1028	5:00	0.001
1028	5:10	0
1028	5:20	0
1028	5:30	0
1028	5:40	0
1028	5:50	0
1028	6:00	0
1028	6:10	0
1028	6:20	0
1028	6:30	0
1028	6:40	0
1028	6:50	0
1028	7:00	0
1028	7:10	0
1028	7:20	0
1028	7:30	0
1028	7:40	0
1028	7:50	0
1028	8:00	0
1028	8:10	0
1028	8:20	0
1028	8:30	0
1028	8:40	0
1028	8:50	0
1028	9:00	0
1028	9:10	0
1028	9:20	0
1028	9:30	0
1028	9:40	0
1028	9:50	0
1028	10:00	0
1028	10:10	0
1028	10:20	0
1028	10:30	0
1028	10:40	0
1028	10:50	0
1028	11:00	0
1028	11:10	0
1028	11:20	0
1028	11:30	0
1028	11:40	0
1028	11:50	0
1028	12:00	0
1028	12:10	0
1028	12:20	0
1028	12:30	0
1028	12:40	0
1028	12:50	0
1028	13:00	0
1028	13:10	0
1030	0:00	0
1030	0:10	0
1030	0:20	0
1030	0:30	0.002
1030	0:40	0.006
1030	0:50	0.022
1030	1:00	0.022
1030	1:10	0.022
1030	1:20	0.021
1030	1:30	0.018
1030	1:40	0.015
1030	1:50	0.012
1030	2:00	0.01
1030	2:10	0.008
1030	2:20	0.007
1030	2:30	0.006
1030	2:40	0.005

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1030	2:50	0.004
1030	3:00	0.004
1030	3:10	0.003
1030	3:20	0.003
1030	3:30	0.002
1030	3:40	0.002
1030	3:50	0.002
1030	4:00	0.001
1030	4:10	0.001
1030	4:20	0.001
1030	4:30	0.001
1030	4:40	0.001
1030	4:50	0.001
1030	5:00	0.001
1030	5:10	0.001
1030	5:20	0.001
1030	5:30	0.001
1030	5:40	0
1030	5:50	0
1030	6:00	0
1030	6:10	0
1030	6:20	0
1030	6:30	0
1030	6:40	0
1030	6:50	0
1030	7:00	0
1030	7:10	0
1030	7:20	0
1030	7:30	0
1030	7:40	0
1030	7:50	0
1030	8:00	0
1030	8:10	0
1030	8:20	0
1030	8:30	0
1030	8:40	0
1030	8:50	0
1030	9:00	0
1030	9:10	0
1030	9:20	0
1030	9:30	0
1030	9:40	0
1030	9:50	0
1030	10:00	0
1030	10:10	0
1030	10:20	0
1030	10:30	0
1030	10:40	0
1030	10:50	0
1030	11:00	0
1030	11:10	0
1030	11:20	0
1030	11:30	0
1030	11:40	0
1030	11:50	0
1030	12:00	0
1030	12:10	0
1030	12:20	0
1030	12:30	0
1030	12:40	0
1030	12:50	0
1030	13:00	0
1030	13:10	0
1031	0:00	0
1031	0:10	0
1031	0:20	0.002
1031	0:30	0.01
1031	0:40	0.02
1031	0:50	0.055
1031	1:00	0.066
1031	1:10	0.066
1031	1:20	0.066
1031	1:30	0.055
1031	1:40	0.035
1031	1:50	0.029
1031	2:00	0.022
1031	2:10	0.019
1031	2:20	0.016
1031	2:30	0.014
1031	2:40	0.013
1031	2:50	0.012
1031	3:00	0.01
1031	3:10	0.008
1031	3:20	0.007
1031	3:30	0.005
1031	3:40	0.004
1031	3:50	0.003
1031	4:00	0.003
1031	4:10	0.002
1031	4:20	0.002
1031	4:30	0.002
1031	4:40	0.001
1031	4:50	0.001
1031	5:00	0.001
1031	5:10	0.001
1031	5:20	0.001
1031	5:30	0.001
1031	5:40	0.001
1031	5:50	0.001
1031	6:00	0.001
1031	6:10	0.001
1031	6:20	0.001
1031	6:30	0.001
1031	6:40	0.001
1031	6:50	0.001
1031	7:00	0
1031	7:10	0
1031	7:20	0
1031	7:30	0
1031	7:40	0
1031	7:50	0
1031	8:00	0
1031	8:10	0
1031	8:20	0
1031	8:30	0
1031	8:40	0
1031	8:50	0
1031	9:00	0
1031	9:10	0
1031	9:20	0
1031	9:30	0
1031	9:40	0
1031	9:50	0
1031	10:00	0
1031	10:10	0
1031	10:20	0
1031	10:30	0
1031	10:40	0
1031	10:50	0
1031	11:00	0
1031	11:10	0
1031	11:20	0
1031	11:30	0
1031	11:40	0
1031	11:50	0
1031	12:00	0
1031	12:10	0
1031	12:20	0
1031	12:30	0
1031	12:40	0
1031	12:50	0
1031	13:00	0
1031	13:10	0
1034	0:00	0
1034	0:10	0
1034	0:20	0.001
1034	0:30	0.004
1034	0:40	0.011
1034	0:50	0.054
1034	1:00	0.066
1034	1:10	0.065
1034	1:20	0.056
1034	1:30	0.044
1034	1:40	0.033
1034	1:50	0.028
1034	2:00	0.023
1034	2:10	0.019
1034	2:20	0.016
1034	2:30	0.014
1034	2:40	0.013
1034	2:50	0.011
1034	3:00	0.01
1034	3:10	0.009
1034	3:20	0.008
1034	3:30	0.006
1034	3:40	0.005
1034	3:50	0.005
1034	4:00	0.004
1034	4:10	0.003
1034	4:20	0.003
1034	4:30	0.003
1034	4:40	0.002
1034	4:50	0.002
1034	5:00	0.002
1034	5:10	0.002
1034	5:20	0.002
1034	5:30	0.001
1034	5:40	0.001
1034	5:50	0.001
1034	6:00	0.001
1034	6:10	0.001
1034	6:20	0.001
1034	6:30	0.001
1034	6:40	0.001
1034	6:50	0.001
1034	7:00	0.001
1034	7:10	0.001
1034	7:20	0.001
1034	7:30	0.001
1034	7:40	0.001
1034	7:50	0.001
1034	8:00	0.001
1034	8:10	0.001
1034	8:20	0.001
1034	8:30	0.001
1034	8:40	0
1034	8:50	0
1034	9:00	0
1034	9:10	0
1034	9:20	0
1034	9:30	0
1034	9:40	0
1034	9:50	0
1034	10:00	0
1034	10:10	0
1034	10:20	0
1034	10:30	0
1034	10:40	0
1034	10:50	0
1034	11:00	0
1034	11:10	0
1034	11:20	0
1034	11:30	0
1034	11:40	0
1034	11:50	0
1034	12:00	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1034	12:10	0
1034	12:20	0
1034	12:30	0
1034	12:40	0
1034	12:50	0
1034	13:00	0
1034	13:10	0
1035	0:00	0
1035	0:10	0
1035	0:20	0
1035	0:30	0.002
1035	0:40	0.004
1035	0:50	0.022
1035	1:00	0.044
1035	1:10	0.039
1035	1:20	0.028
1035	1:30	0.024
1035	1:40	0.019
1035	1:50	0.016
1035	2:00	0.013
1035	2:10	0.012
1035	2:20	0.01
1035	2:30	0.009
1035	2:40	0.007
1035	2:50	0.007
1035	3:00	0.006
1035	3:10	0.005
1035	3:20	0.004
1035	3:30	0.004
1035	3:40	0.003
1035	3:50	0.003
1035	4:00	0.003
1035	4:10	0.002
1035	4:20	0.002
1035	4:30	0.002
1035	4:40	0.002
1035	4:50	0.001
1035	5:00	0.001
1035	5:10	0.001
1035	5:20	0.001
1035	5:30	0.001
1035	5:40	0.001
1035	5:50	0.001
1035	6:00	0.001
1035	6:10	0.001
1035	6:20	0.001
1035	6:30	0.001
1035	6:40	0.001
1035	6:50	0.001
1035	7:00	0.001
1035	7:10	0
1035	7:20	0
1035	7:30	0
1035	7:40	0
1035	7:50	0
1035	8:00	0
1035	8:10	0
1035	8:20	0
1035	8:30	0
1035	8:40	0
1035	8:50	0
1035	9:00	0
1035	9:10	0
1035	9:20	0
1035	9:30	0
1035	9:40	0
1035	9:50	0
1035	10:00	0
1035	10:10	0
1035	10:20	0
1035	10:30	0
1035	10:40	0
1035	10:50	0
1035	11:00	0
1035	11:10	0
1035	11:20	0
1035	11:30	0
1035	11:40	0
1035	11:50	0
1035	12:00	0
1035	12:10	0
1035	12:20	0
1035	12:30	0
1035	12:40	0
1035	12:50	0
1035	13:00	0
1035	13:10	0
1036	0:00	0
1036	0:10	0
1036	0:20	0.001
1036	0:30	0.006
1036	0:40	0.013
1036	0:50	0.044
1036	1:00	0.044
1036	1:10	0.044
1036	1:20	0.044
1036	1:30	0.032
1036	1:40	0.017
1036	1:50	0.012
1036	2:00	0.008
1036	2:10	0.007
1036	2:20	0.006
1036	2:30	0.005
1036	2:40	0.005
1036	2:50	0.004
1036	3:00	0.004
1036	3:10	0.003
1036	3:20	0.002
1036	3:30	0.002
1036	3:40	0.001
1036	3:50	0.001
1036	4:00	0.001
1036	4:10	0.001
1036	4:20	0.001
1036	4:30	0.001
1036	4:40	0.001
1036	4:50	0.001
1036	5:00	0.001
1036	5:10	0.001
1036	5:20	0
1036	5:30	0
1036	5:40	0
1036	5:50	0
1036	6:00	0
1036	6:10	0
1036	6:20	0
1036	6:30	0
1036	6:40	0
1036	6:50	0
1036	7:00	0
1036	7:10	0
1036	7:20	0
1036	7:30	0
1036	7:40	0
1036	7:50	0
1036	8:00	0
1036	8:10	0
1036	8:20	0
1036	8:30	0
1036	8:40	0
1036	8:50	0
1036	9:00	0
1036	9:10	0
1036	9:20	0
1036	9:30	0
1036	9:40	0
1036	9:50	0
1036	10:00	0
1036	10:10	0
1036	10:20	0
1036	10:30	0
1036	10:40	0
1036	10:50	0
1036	11:00	0
1036	11:10	0
1036	11:20	0
1036	11:30	0
1036	11:40	0
1036	11:50	0
1036	12:00	0
1036	12:10	0
1036	12:20	0
1036	12:30	0
1036	12:40	0
1036	12:50	0
1036	13:00	0
1036	13:10	0
1038	0:00	0
1038	0:10	0
1038	0:20	0.001
1038	0:30	0.005
1038	0:40	0.013
1038	0:50	0.044
1038	1:00	0.044
1038	1:10	0.033
1038	1:20	0.027
1038	1:30	0.024
1038	1:40	0.018
1038	1:50	0.015
1038	2:00	0.012
1038	2:10	0.01
1038	2:20	0.008
1038	2:30	0.007
1038	2:40	0.006
1038	2:50	0.006
1038	3:00	0.005
1038	3:10	0.005
1038	3:20	0.004
1038	3:30	0.003
1038	3:40	0.003
1038	3:50	0.002
1038	4:00	0.002
1038	4:10	0.002
1038	4:20	0.002
1038	4:30	0.001
1038	4:40	0.001
1038	4:50	0.001
1038	5:00	0.001
1038	5:10	0.001
1038	5:20	0.001
1038	5:30	0.001
1038	5:40	0.001
1038	5:50	0.001
1038	6:00	0.001
1038	6:10	0.001
1038	6:20	0.001
1038	6:30	0.001
1038	6:40	0.001
1038	6:50	0.001
1038	7:00	0.001
1038	7:10	0.001
1038	7:20	0.001
1038	7:30	0.001
1038	7:40	0.001
1038	7:50	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1038	8:00	0
1038	8:10	0
1038	8:20	0
1038	8:30	0
1038	8:40	0
1038	8:50	0
1038	9:00	0
1038	9:10	0
1038	9:20	0
1038	9:30	0
1038	9:40	0
1038	9:50	0
1038	10:00	0
1038	10:10	0
1038	10:20	0
1038	10:30	0
1038	10:40	0
1038	10:50	0
1038	11:00	0
1038	11:10	0
1038	11:20	0
1038	11:30	0
1038	11:40	0
1038	11:50	0
1038	12:00	0
1038	12:10	0
1038	12:20	0
1038	12:30	0
1038	12:40	0
1038	12:50	0
1038	13:00	0
1038	13:10	0
1039	0:00	0
1039	0:10	0
1039	0:20	0
1039	0:30	0.002
1039	0:40	0.006
1039	0:50	0.022
1039	1:00	0.022
1039	1:10	0.022
1039	1:20	0.022
1039	1:30	0.019
1039	1:40	0.014
1039	1:50	0.01
1039	2:00	0.008
1039	2:10	0.006
1039	2:20	0.005
1039	2:30	0.004
1039	2:40	0.004
1039	2:50	0.003
1039	3:00	0.003
1039	3:10	0.003
1039	3:20	0.002
1039	3:30	0.002
1039	3:40	0.002
1039	3:50	0.001
1039	4:00	0.001
1039	4:10	0.001
1039	4:20	0.001
1039	4:30	0.001
1039	4:40	0.001
1039	4:50	0.001
1039	5:00	0.001
1039	5:10	0.001
1039	5:20	0.001
1039	5:30	0.001
1039	5:40	0
1039	5:50	0
1039	6:00	0
1039	6:10	0
1039	6:20	0
1039	6:30	0
1039	6:40	0
1039	6:50	0
1039	7:00	0
1039	7:10	0
1039	7:20	0
1039	7:30	0
1039	7:40	0
1039	7:50	0
1039	8:00	0
1039	8:10	0
1039	8:20	0
1039	8:30	0
1039	8:40	0
1039	8:50	0
1039	9:00	0
1039	9:10	0
1039	9:20	0
1039	9:30	0
1039	9:40	0
1039	9:50	0
1039	10:00	0
1039	10:10	0
1039	10:20	0
1039	10:30	0
1039	10:40	0
1039	10:50	0
1039	11:00	0
1039	11:10	0
1039	11:20	0
1039	11:30	0
1039	11:40	0
1039	11:50	0
1039	12:00	0
1039	12:10	0
1039	12:20	0
1039	12:30	0
1039	12:40	0
1039	12:50	0
1039	13:00	0
1039	13:10	0

;Design inflow to MH1043 from Oct 2007 Ph1 Subdivision design

1043	0:00	0
1043	0:10	0
1043	0:20	0.001
1043	0:30	0.004
1043	0:40	0.01
1043	0:50	0.052
1043	1:00	0.066
1043	1:10	0.062
1043	1:20	0.031
1043	1:30	0.015
1043	1:40	0.009
1043	1:50	0.007
1043	2:00	0.005
1043	2:10	0.005
1043	2:20	0.004
1043	2:30	0.004
1043	2:40	0.003
1043	2:50	0.003
1043	3:00	0.003
1043	3:10	0.002
1043	3:20	0.002
1043	3:30	0.001
1043	3:40	0.001
1043	3:50	0.001
1043	4:00	0.001
1043	4:10	0.001
1043	4:20	0.001
1043	4:30	0.001
1043	4:40	0.001
1043	4:50	0.001
1043	5:00	0.001
1043	5:10	0.001
1043	5:20	0.001
1043	5:30	0.001
1043	5:40	0.001
1043	5:50	0
1043	6:00	0
1043	6:10	0
1043	6:20	0
1043	6:30	0
1043	6:40	0
1043	6:50	0
1043	7:00	0
1043	7:10	0
1043	7:20	0
1043	7:30	0
1043	7:40	0
1043	7:50	0
1043	8:00	0
1043	8:10	0
1043	8:20	0
1043	8:30	0
1043	8:40	0
1043	8:50	0
1043	9:00	0
1043	9:10	0
1043	9:20	0
1043	9:30	0
1043	9:40	0
1043	9:50	0
1043	10:00	0
1043	10:10	0
1043	10:20	0
1043	10:30	0
1043	10:40	0
1043	10:50	0
1043	11:00	0
1043	11:10	0
1043	11:20	0
1043	11:30	0
1043	11:40	0
1043	11:50	0
1043	12:00	0
1043	12:10	0
1043	12:20	0
1043	12:30	0
1043	12:40	0
1043	12:50	0
1043	13:00	0
1043	13:10	0

1044	0:00	0
1044	0:10	0
1044	0:20	0.001
1044	0:30	0.004
1044	0:40	0.011
1044	0:50	0.022
1044	1:00	0.022
1044	1:10	0.022
1044	1:20	0.019
1044	1:30	0.014
1044	1:40	0.009
1044	1:50	0.007
1044	2:00	0.006
1044	2:10	0.005
1044	2:20	0.004
1044	2:30	0.004
1044	2:40	0.004
1044	2:50	0.003
1044	3:00	0.003
1044	3:10	0.003
1044	3:20	0.002
1044	3:30	0.002

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1044	3:40	0.001
1044	3:50	0.001
1044	4:00	0.001
1044	4:10	0.001
1044	4:20	0.001
1044	4:30	0.001
1044	4:40	0.001
1044	4:50	0.001
1044	5:00	0.001
1044	5:10	0.001
1044	5:20	0.001
1044	5:30	0
1044	5:40	0
1044	5:50	0
1044	6:00	0
1044	6:10	0
1044	6:20	0
1044	6:30	0
1044	6:40	0
1044	6:50	0
1044	7:00	0
1044	7:10	0
1044	7:20	0
1044	7:30	0
1044	7:40	0
1044	7:50	0
1044	8:00	0
1044	8:10	0
1044	8:20	0
1044	8:30	0
1044	8:40	0
1044	8:50	0
1044	9:00	0
1044	9:10	0
1044	9:20	0
1044	9:30	0
1044	9:40	0
1044	9:50	0
1044	10:00	0
1044	10:10	0
1044	10:20	0
1044	10:30	0
1044	10:40	0
1044	10:50	0
1044	11:00	0
1044	11:10	0
1044	11:20	0
1044	11:30	0
1044	11:40	0
1044	11:50	0
1044	12:00	0
1044	12:10	0
1044	12:20	0
1044	12:30	0
1044	12:40	0
1044	12:50	0
1044	13:00	0
1044	13:10	0
1045	0:00	0
1045	0:10	0
1045	0:20	0.001
1045	0:30	0.006
1045	0:40	0.011
1045	0:50	0.044
1045	1:00	0.044
1045	1:10	0.044
1045	1:20	0.044
1045	1:30	0.041
1045	1:40	0.028
1045	1:50	0.022
1045	2:00	0.016
1045	2:10	0.013
1045	2:20	0.011
1045	2:30	0.009
1045	2:40	0.008
1045	2:50	0.007
1045	3:00	0.007
1045	3:10	0.005
1045	3:20	0.005
1045	3:30	0.004
1045	3:40	0.003
1045	3:50	0.003
1045	4:00	0.002
1045	4:10	0.002
1045	4:20	0.002
1045	4:30	0.002
1045	4:40	0.001
1045	4:50	0.001
1045	5:00	0.001
1045	5:10	0.001
1045	5:20	0.001
1045	5:30	0.001
1045	5:40	0.001
1045	5:50	0.001
1045	6:00	0.001
1045	6:10	0.001
1045	6:20	0.001
1045	6:30	0.001
1045	6:40	0.001
1045	6:50	0.001
1045	7:00	0.001
1045	7:10	0.001
1045	7:20	0.001
1045	7:30	0
1045	7:40	0
1045	7:50	0
1045	8:00	0
1045	8:10	0
1045	8:20	0
1045	8:30	0
1045	8:40	0
1045	8:50	0
1045	9:00	0
1045	9:10	0
1045	9:20	0
1045	9:30	0
1045	9:40	0
1045	9:50	0
1045	10:00	0
1045	10:10	0
1045	10:20	0
1045	10:30	0
1045	10:40	0
1045	10:50	0
1045	11:00	0
1045	11:10	0
1045	11:20	0
1045	11:30	0
1045	11:40	0
1045	11:50	0
1045	12:00	0
1045	12:10	0
1045	12:20	0
1045	12:30	0
1045	12:40	0
1045	12:50	0
1045	13:00	0
1045	13:10	0
1046	0:00	0
1046	0:10	0
1046	0:20	0
1046	0:30	0.002
1046	0:40	0.008
1046	0:50	0.022
1046	1:00	0.022
1046	1:10	0.022
1046	1:20	0.018
1046	1:30	0.012
1046	1:40	0.009
1046	1:50	0.006
1046	2:00	0.005
1046	2:10	0.004
1046	2:20	0.004
1046	2:30	0.003
1046	2:40	0.003
1046	2:50	0.003
1046	3:00	0.003
1046	3:10	0.003
1046	3:20	0.002
1046	3:30	0.002
1046	3:40	0.002
1046	3:50	0.001
1046	4:00	0.001
1046	4:10	0.001
1046	4:20	0.001
1046	4:30	0.001
1046	4:40	0.001
1046	4:50	0.001
1046	5:00	0.001
1046	5:10	0.001
1046	5:20	0.001
1046	5:30	0.001
1046	5:40	0.001
1046	5:50	0.001
1046	6:00	0.001
1046	6:10	0.001
1046	6:20	0.001
1046	6:30	0.001
1046	6:40	0
1046	6:50	0
1046	7:00	0
1046	7:10	0
1046	7:20	0
1046	7:30	0
1046	7:40	0
1046	7:50	0
1046	8:00	0
1046	8:10	0
1046	8:20	0
1046	8:30	0
1046	8:40	0
1046	8:50	0
1046	9:00	0
1046	9:10	0
1046	9:20	0
1046	9:30	0
1046	9:40	0
1046	9:50	0
1046	10:00	0
1046	10:10	0
1046	10:20	0
1046	10:30	0
1046	10:40	0
1046	10:50	0
1046	11:00	0
1046	11:10	0
1046	11:20	0
1046	11:30	0
1046	11:40	0
1046	11:50	0
1046	12:00	0
1046	12:10	0
1046	12:20	0
1046	12:30	0
1046	12:40	0
1046	12:50	0

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
1046                    13:00       0
1046                    13:10       0

;Design inflow to MH1047 from Oct 2007 Ph1 Subdivision design
1047                    0:00        0
1047                    0:10        0
1047                    0:20        0.001
1047                    0:30        0.003
1047                    0:40        0.008
1047                    0:50        0.022
1047                    1:00        0.022
1047                    1:10        0.022
1047                    1:20        0.011
1047                    1:30        0.006
1047                    1:40        0.005
1047                    1:50        0.004
1047                    2:00        0.004
1047                    2:10        0.002
1047                    2:20        0.003
1047                    2:30        0.002
1047                    2:40        0.002
1047                    2:50        0.002
1047                    3:00        0.002
1047                    3:10        0.002
1047                    3:20        0.002
1047                    3:30        0.001
1047                    3:40        0.001
1047                    3:50        0.001
1047                    4:00        0.001
1047                    4:10        0.001
1047                    4:20        0.001
1047                    4:30        0.001
1047                    4:40        0.001
1047                    4:50        0.001
1047                    5:00        0.001
1047                    5:10        0.001
1047                    5:20        0.001
1047                    5:30        0
1047                    5:40        0
1047                    5:50        0
1047                    6:00        0
1047                    6:10        0
1047                    6:20        0
1047                    6:30        0
1047                    6:40        0
1047                    6:50        0
1047                    7:00        0
1047                    7:10        0
1047                    7:20        0
1047                    7:30        0
1047                    7:40        0
1047                    7:50        0
1047                    8:00        0
1047                    8:10        0
1047                    8:20        0
1047                    8:30        0
1047                    8:40        0
1047                    8:50        0
1047                    9:00        0
1047                    9:10        0
1047                    9:20        0
1047                    9:30        0
1047                    9:40        0
1047                    9:50        0
1047                    10:00       0
1047                    10:10       0
1047                    10:20       0
1047                    10:30       0
1047                    10:40       0
1047                    10:50       0
1047                    11:00       0
1047                    11:10       0
1047                    11:20       0
1047                    11:30       0
1047                    11:40       0
1047                    11:50       0
1047                    12:00       0
1047                    12:10       0
1047                    12:20       0
1047                    12:30       0
1047                    12:40       0
1047                    12:50       0
1047                    13:00       0
1047                    13:10       0

;Design inflow to MH1048A from Oct 2007 Ph1 Subdivision design
1048A                   0:00        0
1048A                   0:10        0
1048A                   0:20        0.001
1048A                   0:30        0.007
1048A                   0:40        0.01
1048A                   0:50        0.044
1048A                   1:00        0.044
1048A                   1:10        0.044
1048A                   1:20        0.044
1048A                   1:30        0.044
1048A                   1:40        0.044
1048A                   1:50        0.034
1048A                   2:00        0.012
1048A                   2:10        0.006
1048A                   2:20        0.008
1048A                   2:30        0.005
1048A                   2:40        0.006
1048A                   2:50        0.005
1048A                   3:00        0.005
1048A                   3:10        0.004
1048A                   3:20        0.003
1048A                   3:30        0.002
1048A                   3:40        0.002
1048A                   3:50        0.001
1048A                   4:00        0.001
1048A                   4:10        0.001
1048A                   4:20        0.001
1048A                   4:30        0.001
1048A                   4:40        0.001
1048A                   4:50        0.001
1048A                   5:00        0.001
1048A                   5:10        0.001
1048A                   5:20        0.001
1048A                   5:30        0.001
1048A                   5:40        0.001
1048A                   5:50        0.001
1048A                   6:00        0.001
1048A                   6:10        0.001
1048A                   6:20        0
1048A                   6:30        0
1048A                   6:40        0
1048A                   6:50        0
1048A                   7:00        0
1048A                   7:10        0
1048A                   7:20        0
1048A                   7:30        0
1048A                   7:40        0
1048A                   7:50        0
1048A                   8:00        0
1048A                   8:10        0
1048A                   8:20        0
1048A                   8:30        0
1048A                   8:40        0
1048A                   8:50        0
1048A                   9:00        0
1048A                   9:10        0
1048A                   9:20        0
1048A                   9:30        0
1048A                   9:40        0
1048A                   9:50        0
1048A                   10:00       0
1048A                   10:10       0
1048A                   10:20       0
1048A                   10:30       0
1048A                   10:40       0
1048A                   10:50       0
1048A                   11:00       0
1048A                   11:10       0
1048A                   11:20       0
1048A                   11:30       0
1048A                   11:40       0
1048A                   11:50       0
1048A                   12:00       0
1048A                   12:10       0
1048A                   12:20       0
1048A                   12:30       0
1048A                   12:40       0
1048A                   12:50       0
1048A                   13:00       0
1048A                   13:10       0

;Design inflow to MH1051 from Oct 2007 Ph1 Subdivision design
1051                    0:00        0
1051                    0:10        0
1051                    0:20        0
1051                    0:30        0.002
1051                    0:40        0.002
1051                    0:50        0
1051                    1:00        0.022
1051                    1:10        0.022
1051                    1:20        0.022
1051                    1:30        0.016
1051                    1:40        0.007
1051                    1:50        0.006
1051                    2:00        0.003
1051                    2:10        0.003
1051                    2:20        0.002
1051                    2:30        0.002
1051                    2:40        0.002
1051                    2:50        0.002
1051                    3:00        0.002
1051                    3:10        0.001
1051                    3:20        0.001
1051                    3:30        0.001
1051                    3:40        0.001
1051                    3:50        0
1051                    4:00        0
1051                    4:10        0
1051                    4:20        0
1051                    4:30        0
1051                    4:40        0
1051                    4:50        0
1051                    5:00        0
1051                    5:10        0
1051                    5:20        0
1051                    5:30        0
1051                    5:40        0
1051                    5:50        0
1051                    6:00        0
1051                    6:10        0
1051                    6:20        0
1051                    6:30        0
1051                    6:40        0
1051                    6:50        0
1051                    7:00        0
1051                    7:10        0
1051                    7:20        0
1051                    7:30        0
1051                    7:40        0
1051                    7:50        0
1051                    8:00        0
1051                    8:10        0
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

1051	8:20	0
1051	8:30	0
1051	8:40	0
1051	8:50	0
1051	9:00	0
1051	9:10	0
1051	9:20	0
1051	9:30	0
1051	9:40	0
1051	9:50	0
1051	10:00	0
1051	10:10	0
1051	10:20	0
1051	10:30	0
1051	10:40	0
1051	10:50	0
1051	11:00	0
1051	11:10	0
1051	11:20	0
1051	11:30	0
1051	11:40	0
1051	11:50	0
1051	12:00	0
1051	12:10	0
1051	12:20	0
1051	12:30	0
1051	12:40	0
1051	12:50	0
1051	13:00	0
1051	13:10	0
1053	0:00	0
1053	0:10	0
1053	0:20	0.002
1053	0:30	0.008
1053	0:40	0.019
1053	0:50	0.082
1053	1:00	0.088
1053	1:10	0.078
1053	1:20	0.047
1053	1:30	0.038
1053	1:40	0.025
1053	1:50	0.02
1053	2:00	0.015
1053	2:10	0.012
1053	2:20	0.01
1053	2:30	0.009
1053	2:40	0.008
1053	2:50	0.007
1053	3:00	0.006
1053	3:10	0.005
1053	3:20	0.004
1053	3:30	0.004
1053	3:40	0.003
1053	3:50	0.003
1053	4:00	0.002
1053	4:10	0.002
1053	4:20	0.002
1053	4:30	0.002
1053	4:40	0.001
1053	4:50	0.001
1053	5:00	0.001
1053	5:10	0.001
1053	5:20	0.001
1053	5:30	0.001
1053	5:40	0.001
1053	5:50	0.001
1053	6:00	0.001
1053	6:10	0.001
1053	6:20	0.001
1053	6:30	0.001
1053	6:40	0.001
1053	6:50	0.001
1053	7:00	0.001
1053	7:10	0.001
1053	7:20	0.001
1053	7:30	0.001
1053	7:40	0.001
1053	7:50	0.001
1053	8:00	0.001
1053	8:10	0.001
1053	8:20	0
1053	8:30	0
1053	8:40	0
1053	8:50	0
1053	9:00	0
1053	9:10	0
1053	9:20	0
1053	9:30	0
1053	9:40	0
1053	9:50	0
1053	10:00	0
1053	10:10	0
1053	10:20	0
1053	10:30	0
1053	10:40	0
1053	10:50	0
1053	11:00	0
1053	11:10	0
1053	11:20	0
1053	11:30	0
1053	11:40	0
1053	11:50	0
1053	12:00	0
1053	12:10	0
1053	12:20	0
1053	12:30	0
1053	12:40	0
1053	12:50	0
1053	13:00	0
1053	13:10	0
;Design inflow to MH2000	from Oct 2007 Ph2 Subdivision design	
2000	0:00	0
2000	0:10	0
2000	0:20	0.001
2000	0:30	0.003
2000	0:40	0.008
2000	0:50	0.022
2000	1:00	0.022
2000	1:10	0.011
2000	1:20	0.008
2000	1:30	0.005
2000	1:40	0.004
2000	1:50	0.003
2000	2:00	0.002
2000	2:10	0.002
2000	2:20	0.002
2000	2:30	0.002
2000	2:40	0.002
2000	2:50	0.001
2000	3:00	0.001
2000	3:10	0.001
2000	3:20	0.001
2000	3:30	0.001
2000	3:40	0.001
2000	3:50	0.001
2000	4:00	0.001
2000	4:10	0
2000	4:20	0
2000	4:30	0
2000	4:40	0
2000	4:50	0
2000	5:00	0
2000	5:10	0
2000	5:20	0
2000	5:30	0
2000	5:40	0
2000	5:50	0
2000	6:00	0
2000	6:10	0
2000	6:20	0
2000	6:30	0
2000	6:40	0
2000	6:50	0
2000	7:00	0
2000A	0:00	0
2000A	0:10	0
2000A	0:20	0
2000A	0:30	0.001
2000A	0:40	0.003
2000A	0:50	0.044
2000A	1:00	0.041
2000A	1:10	0.024
2000A	1:20	0.009
2000A	1:30	0.007
2000A	1:40	0.006
2000A	1:50	0.004
2000A	2:00	0.004
2000A	2:10	0.003
2000A	2:20	0.003
2000A	2:30	0.003
2000A	2:40	0.002
2000A	2:50	0.002
2000A	3:00	0.002
2000A	3:10	0.002
2000A	3:20	0.002
2000A	3:30	0.002
2000A	3:40	0.001
2000A	3:50	0.001
2000A	4:00	0.001
2000A	4:10	0.001
2000A	4:20	0.001
2000A	4:30	0.001
2000A	4:40	0.001
2000A	4:50	0.001
2000A	5:00	0.001
2000A	5:10	0.001
2000A	5:20	0.001
2000A	5:30	0.001
2000A	5:40	0.001
2000A	5:50	0.001
2000A	6:00	0.001
2000A	6:10	0.001
2000A	6:20	0.001
2000A	6:30	0
2000A	6:40	0
2000A	6:50	0
2000A	7:00	0
;Design inflow to MH2001	from Oct 2007 Ph2 Subdivision design	
2001	0:00	0
2001	0:10	0
2001	0:20	0.001
2001	0:30	0.003
2001	0:40	0.009
2001	0:50	0.022
2001	1:00	0.022
2001	1:10	0.016
2001	1:20	0.01
2001	1:30	0.008
2001	1:40	0.005
2001	1:50	0.004
2001	2:00	0.003
2001	2:10	0.003
2001	2:20	0.003
2001	2:30	0.002

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
2001                    2:40    0.002
2001                    2:50    0.002
2001                    3:00    0.002
2001                    3:10    0.001
2001                    3:20    0.001
2001                    3:30    0.001
2001                    3:40    0.001
2001                    3:50    0.001
2001                    4:00    0.001
2001                    4:10    0
2001                    4:20    0
2001                    4:30    0
2001                    4:40    0
2001                    4:50    0
2001                    5:00    0
2001                    5:10    0
2001                    5:20    0
2001                    5:30    0
2001                    5:40    0
2001                    5:50    0
2001                    6:00    0
2001                    6:10    0
2001                    6:20    0
2001                    6:30    0
2001                    6:40    0
2001                    6:50    0
2001                    7:00    0

;Design inflow to MH2004  from Oct 2007 Ph2 Subdivision design
2004                    0:00    0
2004                    0:10    0
2004                    0:20    0.002
2004                    0:30    0.007
2004                    0:40    0.017
2004                    0:50    0.044
2004                    1:00    0.044
2004                    1:10    0.033
2004                    1:20    0.019
2004                    1:30    0.011
2004                    1:40    0.008
2004                    1:50    0.007
2004                    2:00    0.005
2004                    2:10    0.005
2004                    2:20    0.004
2004                    2:30    0.004
2004                    2:40    0.004
2004                    2:50    0.003
2004                    3:00    0.003
2004                    3:10    0.002
2004                    3:20    0.002
2004                    3:30    0.001
2004                    3:40    0.001
2004                    3:50    0.001
2004                    4:00    0.001
2004                    4:10    0.001
2004                    4:20    0.001
2004                    4:30    0.001
2004                    4:40    0.001
2004                    4:50    0.001
2004                    5:00    0.001
2004                    5:10    0.001
2004                    5:20    0
2004                    5:30    0
2004                    5:40    0
2004                    5:50    0
2004                    6:00    0
2004                    6:10    0
2004                    6:20    0
2004                    6:30    0
2004                    6:40    0
2004                    6:50    0
2004                    7:00    0

August4_1988            0:00    0
August4_1988            0:05    0.1
August4_1988            0:10    0.1
August4_1988            0:15    0
August4_1988            0:20    3.7
August4_1988            0:25    6.2
August4_1988            0:30    101.5
August4_1988            0:35    15.5
August4_1988            0:40    29.3
August4_1988            0:45    19.8
August4_1988            0:50    1.5
August4_1988            0:55    1.7
August4_1988            1:00    5.4
August4_1988            1:05    24.6
August4_1988            1:10    26.5
August4_1988            1:15    34.9
August4_1988            1:20    10.2
August4_1988            1:25    27.1
August4_1988            1:30    104.4
August4_1988            1:35    27.5
August4_1988            1:40    62.5
August4_1988            1:45    31.8
August4_1988            1:50    79.8
August4_1988            1:55    67.5
August4_1988            2:00    156.2
August4_1988            2:05    5.1
August4_1988            2:10    0.2
August4_1988            2:15    0.2
August4_1988            2:20    0.2
August4_1988            2:25    0.2
August4_1988            2:30    0.2
August4_1988            2:35    0.2
August4_1988            2:40    0.2
August4_1988            2:45    0.2
August4_1988            2:50    0.2
August4_1988            2:55    0.2
August4_1988            3:00    12.8
August4_1988            3:05    14
August4_1988            3:10    22.2
August4_1988            3:15    21.8
August4_1988            3:20    1.4
August4_1988            3:25    0.2
August4_1988            3:30    0.2
August4_1988            3:35    0.2
August4_1988            3:40    0.2
August4_1988            3:45    0.2
August4_1988            3:50    0.2
August4_1988            3:55    0.2
August4_1988            4:00    0.2
August4_1988            4:05    0.2
August4_1988            4:10    0.2
August4_1988            4:15    0.2
August4_1988            4:20    0.2
August4_1988            4:25    0.2
August4_1988            4:30    0.2
August4_1988            4:35    0.2
August4_1988            4:40    0.2
August4_1988            4:45    0.2
August4_1988            4:50    0.2
August4_1988            4:55    0.2
August4_1988            5:00    2.9
August4_1988            5:05    7.8
August4_1988            5:10    10
                        5:15    6.3
August4_1988            5:20    5.1
August4_1988            5:25    9.8
August4_1988            5:30    2.6
August4_1988            5:35    1.7

August8_1996            0:00    4
August8_1996            0:05    11.9
August8_1996            0:10    26.5
August8_1996            0:15    13.3
August8_1996            0:20    0
August8_1996            0:25    2.7
August8_1996            0:30    0
August8_1996            0:35    8
August8_1996            0:40    18.6
August8_1996            0:45    10.6
August8_1996            0:50    21.2
August8_1996            0:55    2.7
August8_1996            1:00    2.7
August8_1996            1:05    15.9
August8_1996            1:10    66.3
August8_1996            1:15    55.7
August8_1996            1:20    122
August8_1996            1:25    88.9
August8_1996            1:30    9.63
August8_1996            1:35    8
August8_1996            1:40    4
August8_1996            1:45    0
August8_1996            1:50    2.7
August8_1996            1:55    0
August8_1996            2:00    0
August8_1996            2:05    0
August8_1996            2:10    5.3
August8_1996            2:15    0
August8_1996            2:20    0
August8_1996            2:25    0
August8_1996            2:30    0
August8_1996            2:35    0
August8_1996            2:40    0
August8_1996            2:45    4
August8_1996            2:50    53.1
August8_1996            2:55    69
August8_1996            3:00    63.7
August8_1996            3:05    58.4
August8_1996            3:10    47.8
August8_1996            3:15    15.9
August8_1996            3:20    13.3
August8_1996            3:25    8
August8_1996            3:30    5.3
August8_1996            3:35    6.6
August8_1996            3:40    2.7
August8_1996            3:45    4
August8_1996            3:50    2.7
August8_1996            3:55    4
August8_1996            4:00    2.7
August8_1996            4:05    5.3
August8_1996            4:10    4
August8_1996            4:15    2.7
August8_1996            4:20    4
August8_1996            4:25    2.7
August8_1996            4:30    1.3
August8_1996            4:35    1.3
August8_1996            4:40    0
August8_1996            4:45    0
August8_1996            4:50    0
August8_1996            4:55    0
August8_1996            5:00    2.7
August8_1996            5:05    0
August8_1996            5:10    0
August8_1996            5:15    0
August8_1996            5:20    0
August8_1996            5:25    0
August8_1996            5:30    0
August8_1996            5:35    0
August8_1996            5:40    1.3

Chicago_100yr_3h        0:00    0
Chicago_100yr_3h        0:10    6.05
Chicago_100yr_3h        0:20    7.54
Chicago_100yr_3h        0:30    10.16
Chicago_100yr_3h        0:40    15.97
Chicago_100yr_3h        0:50    40.65
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

Chicago_100yr_3h	1:00	178.56
Chicago_100yr_3h	1:10	54.05
Chicago_100yr_3h	1:20	27.32
Chicago_100yr_3h	1:30	18.24
Chicago_100yr_3h	1:40	13.74
Chicago_100yr_3h	1:50	11.06
Chicago_100yr_3h	2:00	9.29
Chicago_100yr_3h	2:10	8.02
Chicago_100yr_3h	2:20	7.08
Chicago_100yr_3h	2:30	6.35
Chicago_100yr_3h	2:40	5.76
Chicago_100yr_3h	2:50	5.28
Chicago_100yr_3h	3:00	4.88

Chicago_100yr+20%_3h	0:00	0
Chicago_100yr+20%_3h	0:10	7.26
Chicago_100yr+20%_3h	0:20	9.048
Chicago_100yr+20%_3h	0:30	12.192
Chicago_100yr+20%_3h	0:40	19.164
Chicago_100yr+20%_3h	0:50	48.78
Chicago_100yr+20%_3h	1:00	214.272
Chicago_100yr+20%_3h	1:10	64.86
Chicago_100yr+20%_3h	1:20	32.784
Chicago_100yr+20%_3h	1:30	21.888
Chicago_100yr+20%_3h	1:40	16.488
Chicago_100yr+20%_3h	1:50	13.272
Chicago_100yr+20%_3h	2:00	11.148
Chicago_100yr+20%_3h	2:10	9.624
Chicago_100yr+20%_3h	2:20	8.496
Chicago_100yr+20%_3h	2:30	7.62
Chicago_100yr+20%_3h	2:40	6.912
Chicago_100yr+20%_3h	2:50	6.336
Chicago_100yr+20%_3h	3:00	5.856

Chicago_2yr_3h	0:00	0
Chicago_2yr_3h	0:10	2.81
Chicago_2yr_3h	0:20	3.5
Chicago_2yr_3h	0:30	4.69
Chicago_2yr_3h	0:40	7.3
Chicago_2yr_3h	0:50	18.21
Chicago_2yr_3h	1:00	76.81
Chicago_2yr_3h	1:10	24.08
Chicago_2yr_3h	1:20	12.36
Chicago_2yr_3h	1:30	8.32
Chicago_2yr_3h	1:40	6.3
Chicago_2yr_3h	1:50	5.09
Chicago_2yr_3h	2:00	4.29
Chicago_2yr_3h	2:10	3.72
Chicago_2yr_3h	2:20	3.29
Chicago_2yr_3h	2:30	2.95
Chicago_2yr_3h	2:40	2.68
Chicago_2yr_3h	2:50	2.46
Chicago_2yr_3h	3:00	2.28

Chicago_5yr_3h	0:00	0
Chicago_5yr_3h	0:10	3.68
Chicago_5yr_3h	0:20	4.58
Chicago_5yr_3h	0:30	6.15
Chicago_5yr_3h	0:40	9.61
Chicago_5yr_3h	0:50	24.17
Chicago_5yr_3h	1:00	104.19
Chicago_5yr_3h	1:10	32.04
Chicago_5yr_3h	1:20	16.34
Chicago_5yr_3h	1:30	10.96
Chicago_5yr_3h	1:40	8.29
Chicago_5yr_3h	1:50	6.69
Chicago_5yr_3h	2:00	5.63
Chicago_5yr_3h	2:10	4.87
Chicago_5yr_3h	2:20	4.3
Chicago_5yr_3h	2:30	3.86
Chicago_5yr_3h	2:40	3.51
Chicago_5yr_3h	2:50	3.22
Chicago_5yr_3h	3:00	2.98

July1_1979	0:00	0
July1_1979	0:05	2.3
July1_1979	0:10	2.3
July1_1979	0:15	8.89
July1_1979	0:20	8.89
July1_1979	0:25	8.89
July1_1979	0:30	8.89
July1_1979	0:35	38.1
July1_1979	0:40	38.1
July1_1979	0:45	38.1
July1_1979	0:50	38.1
July1_1979	0:55	38.1
July1_1979	1:00	38.1
July1_1979	1:05	38.1
July1_1979	1:10	50.8
July1_1979	1:15	50.8
July1_1979	1:20	76.2
July1_1979	1:25	106.7
July1_1979	1:30	106.7
July1_1979	1:35	71.1
July1_1979	1:40	71.1
July1_1979	1:45	30.5
July1_1979	1:50	30.5
July1_1979	1:55	30.5
July1_1979	2:00	30.5
July1_1979	2:05	3.8
July1_1979	2:10	3.8
July1_1979	2:15	3.8
July1_1979	2:20	3.8
July1_1979	2:25	3.8
July1_1979	2:30	3.8
July1_1979	2:35	3.8
July1_1979	2:40	3.8
July1_1979	2:45	3.8
July1_1979	2:50	3.8
July1_1979	2:55	3.8
July1_1979	3:00	3.8

SCS_Type_II_100yr_103.2mm	0:00	1.17
SCS_Type_II_100yr_103.2mm	0:10	1.17
SCS_Type_II_100yr_103.2mm	0:20	1.17
SCS_Type_II_100yr_103.2mm	0:30	1.17
SCS_Type_II_100yr_103.2mm	0:40	1.17
SCS_Type_II_100yr_103.2mm	0:50	1.17
SCS_Type_II_100yr_103.2mm	1:00	1.17
SCS_Type_II_100yr_103.2mm	1:10	1.17
SCS_Type_II_100yr_103.2mm	1:20	1.17
SCS_Type_II_100yr_103.2mm	1:30	1.17
SCS_Type_II_100yr_103.2mm	1:40	1.17
SCS_Type_II_100yr_103.2mm	1:50	1.17
SCS_Type_II_100yr_103.2mm	2:00	1.39
SCS_Type_II_100yr_103.2mm	2:10	1.39
SCS_Type_II_100yr_103.2mm	2:20	1.39
SCS_Type_II_100yr_103.2mm	2:30	1.39
SCS_Type_II_100yr_103.2mm	2:40	1.39
SCS_Type_II_100yr_103.2mm	2:50	1.39
SCS_Type_II_100yr_103.2mm	3:00	1.39
SCS_Type_II_100yr_103.2mm	3:10	1.39
SCS_Type_II_100yr_103.2mm	3:20	1.39
SCS_Type_II_100yr_103.2mm	3:30	1.39
SCS_Type_II_100yr_103.2mm	3:40	1.39
SCS_Type_II_100yr_103.2mm	3:50	1.39
SCS_Type_II_100yr_103.2mm	4:00	1.71
SCS_Type_II_100yr_103.2mm	4:10	1.71
SCS_Type_II_100yr_103.2mm	4:20	1.71
SCS_Type_II_100yr_103.2mm	4:30	1.71
SCS_Type_II_100yr_103.2mm	4:40	1.71
SCS_Type_II_100yr_103.2mm	4:50	1.71
SCS_Type_II_100yr_103.2mm	5:00	1.71
SCS_Type_II_100yr_103.2mm	5:10	1.71
SCS_Type_II_100yr_103.2mm	5:20	1.71
SCS_Type_II_100yr_103.2mm	5:30	1.71
SCS_Type_II_100yr_103.2mm	5:40	1.71
SCS_Type_II_100yr_103.2mm	5:50	1.71
SCS_Type_II_100yr_103.2mm	6:00	1.92
SCS_Type_II_100yr_103.2mm	6:10	1.92
SCS_Type_II_100yr_103.2mm	6:20	1.92
SCS_Type_II_100yr_103.2mm	6:30	1.92
SCS_Type_II_100yr_103.2mm	6:40	1.92
SCS_Type_II_100yr_103.2mm	6:50	1.92
SCS_Type_II_100yr_103.2mm	7:00	2.35
SCS_Type_II_100yr_103.2mm	7:10	2.35
SCS_Type_II_100yr_103.2mm	7:20	2.35
SCS_Type_II_100yr_103.2mm	7:30	2.35
SCS_Type_II_100yr_103.2mm	7:40	2.35
SCS_Type_II_100yr_103.2mm	7:50	2.35
SCS_Type_II_100yr_103.2mm	8:00	2.78
SCS_Type_II_100yr_103.2mm	8:10	2.78
SCS_Type_II_100yr_103.2mm	8:20	2.78
SCS_Type_II_100yr_103.2mm	8:30	2.99
SCS_Type_II_100yr_103.2mm	8:40	2.99
SCS_Type_II_100yr_103.2mm	8:50	2.99
SCS_Type_II_100yr_103.2mm	9:00	3.42
SCS_Type_II_100yr_103.2mm	9:10	3.42
SCS_Type_II_100yr_103.2mm	9:20	3.42
SCS_Type_II_100yr_103.2mm	9:30	3.84
SCS_Type_II_100yr_103.2mm	9:40	3.84
SCS_Type_II_100yr_103.2mm	9:50	3.84
SCS_Type_II_100yr_103.2mm	10:00	4.91
SCS_Type_II_100yr_103.2mm	10:10	4.91
SCS_Type_II_100yr_103.2mm	10:20	4.91
SCS_Type_II_100yr_103.2mm	10:30	6.62
SCS_Type_II_100yr_103.2mm	10:40	6.62
SCS_Type_II_100yr_103.2mm	10:50	6.62
SCS_Type_II_100yr_103.2mm	11:00	10.25
SCS_Type_II_100yr_103.2mm	11:10	10.25
SCS_Type_II_100yr_103.2mm	11:20	10.25
SCS_Type_II_100yr_103.2mm	11:30	31.6
SCS_Type_II_100yr_103.2mm	11:40	81.12
SCS_Type_II_100yr_103.2mm	11:50	130.65
SCS_Type_II_100yr_103.2mm	12:00	15.37
SCS_Type_II_100yr_103.2mm	12:10	15.37
SCS_Type_II_100yr_103.2mm	12:20	15.37
SCS_Type_II_100yr_103.2mm	12:30	7.9
SCS_Type_II_100yr_103.2mm	12:40	7.9
SCS_Type_II_100yr_103.2mm	12:50	7.9
SCS_Type_II_100yr_103.2mm	13:00	5.76
SCS_Type_II_100yr_103.2mm	13:10	5.76
SCS_Type_II_100yr_103.2mm	13:20	5.76
SCS_Type_II_100yr_103.2mm	13:30	4.48
SCS_Type_II_100yr_103.2mm	13:40	4.48
SCS_Type_II_100yr_103.2mm	13:50	4.48
SCS_Type_II_100yr_103.2mm	14:00	3.2
SCS_Type_II_100yr_103.2mm	14:10	3.2
SCS_Type_II_100yr_103.2mm	14:20	3.2
SCS_Type_II_100yr_103.2mm	14:30	3.2
SCS_Type_II_100yr_103.2mm	14:40	3.2
SCS_Type_II_100yr_103.2mm	14:50	3.2
SCS_Type_II_100yr_103.2mm	15:00	3.2
SCS_Type_II_100yr_103.2mm	15:10	3.2
SCS_Type_II_100yr_103.2mm	15:20	3.2
SCS_Type_II_100yr_103.2mm	15:30	3.2
SCS_Type_II_100yr_103.2mm	15:40	3.2
SCS_Type_II_100yr_103.2mm	15:50	3.2
SCS_Type_II_100yr_103.2mm	16:00	1.92
SCS_Type_II_100yr_103.2mm	16:10	1.92
SCS_Type_II_100yr_103.2mm	16:20	1.92
SCS_Type_II_100yr_103.2mm	16:30	1.92
SCS_Type_II_100yr_103.2mm	16:40	1.92
SCS_Type_II_100yr_103.2mm	16:50	1.92
SCS_Type_II_100yr_103.2mm	17:00	1.92
SCS_Type_II_100yr_103.2mm	17:10	1.92
SCS_Type_II_100yr_103.2mm	17:20	1.92
SCS_Type_II_100yr_103.2mm	17:30	1.92

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

```
SCS_Type_II_100yr_103.2mm          17:40     1.92
SCS_Type_II_100yr_103.2mm          17:50     1.92
SCS_Type_II_100yr_103.2mm          18:00     1.92
SCS_Type_II_100yr_103.2mm          18:10     1.92
SCS_Type_II_100yr_103.2mm          18:20     1.92
SCS_Type_II_100yr_103.2mm          18:30     1.92
SCS_Type_II_100yr_103.2mm          18:40     1.92
SCS_Type_II_100yr_103.2mm          18:50     1.92
SCS_Type_II_100yr_103.2mm          19:00     1.92
SCS_Type_II_100yr_103.2mm          19:10     1.92
SCS_Type_II_100yr_103.2mm          19:20     1.92
SCS_Type_II_100yr_103.2mm          19:30     1.92
SCS_Type_II_100yr_103.2mm          19:40     1.92
SCS_Type_II_100yr_103.2mm          19:50     1.92
SCS_Type_II_100yr_103.2mm          20:00     1.28
SCS_Type_II_100yr_103.2mm          20:10     1.28
SCS_Type_II_100yr_103.2mm          20:20     1.28
SCS_Type_II_100yr_103.2mm          20:30     1.28
SCS_Type_II_100yr_103.2mm          20:40     1.28
SCS_Type_II_100yr_103.2mm          20:50     1.28
SCS_Type_II_100yr_103.2mm          21:00     1.28
SCS_Type_II_100yr_103.2mm          21:10     1.28
SCS_Type_II_100yr_103.2mm          21:20     1.28
SCS_Type_II_100yr_103.2mm          21:30     1.28
SCS_Type_II_100yr_103.2mm          21:40     1.28
SCS_Type_II_100yr_103.2mm          21:50     1.28
SCS_Type_II_100yr_103.2mm          22:00     1.28
SCS_Type_II_100yr_103.2mm          22:10     1.28
SCS_Type_II_100yr_103.2mm          22:20     1.28
SCS_Type_II_100yr_103.2mm          22:30     1.28
SCS_Type_II_100yr_103.2mm          22:40     1.28
SCS_Type_II_100yr_103.2mm          22:50     1.28
SCS_Type_II_100yr_103.2mm          23:00     1.28
SCS_Type_II_100yr_103.2mm          23:10     1.28
SCS_Type_II_100yr_103.2mm          23:20     1.28
SCS_Type_II_100yr_103.2mm          23:30     1.28
SCS_Type_II_100yr_103.2mm          23:40     1.28
SCS_Type_II_100yr_103.2mm          23:50     1.28

[REPORT]
;;Reporting Options
INPUT      YES
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]
Node       2005               MH
Node       Diversion-1053     MH
Node       1001               ExMH
Node       1002               ExMH
Node       1004               ExMH
Node       1005               ExMH
Node       1006               ExMH
Node       1006A              ExMH
Node       1007               ExMH
Node       1008               ExMH
Node       1009               ExMH
Node       1010               ExMH
Node       1011               ExMH
Node       1012               ExMH
Node       1013               ExMH
Node       1014               ExMH
Node       1015               ExMH
Node       1016               ExMH
Node       1017               ExMH
Node       1018               ExMH
Node       1019               ExMH
Node       102_(C-STRM-NEW)   MH
Node       1020               ExMH
Node       1021               ExMH
Node       1022               ExMH
Node       1023               ExMH
Node       1024               ExMH
Node       1025               ExMH
Node       1026               ExMH
Node       1027               ExMH
Node       1028               ExMH
Node       1029               ExMH
Node       103_(C-STRM-NEW)   MH
Node       1030               ExMH
Node       1031               ExMH
Node       1033               ExMH
Node       1034               ExMH
Node       1035               ExMH
Node       1036               ExMH
Node       1037               ExMH
Node       1038               ExMH
Node       1039               ExMH
Node       104_(C-STRM-NEW)   MH
Node       1040               ExMH
Node       1041               ExMH
Node       1042               ExMH
Node       1043               ExMH
Node       1043A              ExMH
Node       1044               ExMH
Node       1045               ExMH
Node       1046               ExMH
Node       1047               ExMH
Node       1048               ExMH
Node       1048A              ExMH
Node       1049               ExMH
Node       1050               ExMH
Node       1051               ExMH
Node       1052               ExMH
Node       1053               ExMH
Node       2000               ExMH
Node       2001               ExMH
Node       2002               ExMH
Node       2003               ExMH
Node       2004               ExMH
Node       302_(C-STRM-NEW)   MH
Node       303_(C-STRM-NEW)   MH
Node       304_(C-STRM-NEW)   MH
Node       305_(C-STRM-NEW)   MH
Node       306_(C-STRM-NEW)   MH
Node       307_(C-STRM-NEW)   MH
Node       308_(C-STRM-NEW)   MH
Node       309_(C-STRM-NEW)   MH
Node       310_(C-STRM-NEW)   MH
Node       502_(C-STRM-NEW)   MH
Node       503_(C-STRM-NEW)   MH
Node       504_(C-STRM-NEW)   MH
Node       505_(C-STRM-NEW)   MH
Node       506_(C-STRM-NEW)   MH
Node       507_(C-STRM-NEW)   MH
Node       508_(C-STRM-NEW)   MH
Node       509_(C-STRM-NEW)   MH
Node       510_(C-STRM-NEW)   MH
Node       511_(C-STRM-NEW)   MH
Node       512_(C-STRM-NEW)   MH
Node       CB-102             CB
Node       CB-304             CB
Node       CB-306             CB
Node       CB-310             CB
Node       CB-502             CB
Node       CB-504             CB
Node       CB-506             CB
Node       CB-508             CB
Node       CB-512             CB
Node       STM100             MH
Node       STM301             MH
Node       STM501             MH
Link       102-100_(C-STRM-NEW) MinorSystem
Link       103-102_(C-STRM-NEW) MinorSystem
Link       104-103_(C-STRM-NEW) MinorSystem
Link       302-301_(C-STRM-NEW) MinorSystem
Link       303-302_(C-STRM-NEW) MinorSystem
Link       304-302_(C-STRM-NEW) MinorSystem
Link       305-304_(C-STRM-NEW) MinorSystem
Link       306-304_(C-STRM-NEW) MinorSystem
Link       307-306_(C-STRM-NEW) MinorSystem
Link       308-306_(C-STRM-NEW) MinorSystem
Link       309-308_(C-STRM-NEW) MinorSystem
Link       310-309_(C-STRM-NEW) MinorSystem
Link       502-501_(C-STRM-NEW) MinorSystem
Link       503-502_(C-STRM-NEW) MinorSystem
Link       504-503_(C-STRM-NEW) MinorSystem
Link       505-504_(C-STRM-NEW) MinorSystem
Link       506-504_(C-STRM-NEW) MinorSystem
Link       507-506_(C-STRM-NEW) MinorSystem
Link       508-506_(C-STRM-NEW) MinorSystem
Link       509-508_(C-STRM-NEW) MinorSystem
Link       510-508_(C-STRM-NEW) MinorSystem
Link       511-510_(C-STRM-NEW) MinorSystem
Link       512-511_(C-STRM-NEW) MinorSystem
Link       C10                MajorSystem
Link       C11                MajorSystem
Link       C12                MajorSystem
Link       C13                MajorSystem
Link       C14                MajorSystem
Link       C2                 MajorSystem
Link       C4                 MajorSystem
Link       C6                 MajorSystem
Link       C68                ExMinorSystem
Link       C8                 MajorSystem
Link       C9                 MajorSystem
Link       L101               ExMinorSystem
Link       L102               ExMinorSystem
Link       L103A              ExMinorSystem
Link       L103B              ExMinorSystem
Link       L104               ExMinorSystem
Link       L105               ExMinorSystem
Link       L106               ExMinorSystem
Link       L107               ExMinorSystem
Link       L108               ExMinorSystem
Link       L109               ExMinorSystem
Link       L110               ExMinorSystem
Link       L111               ExMinorSystem
Link       L112               ExMinorSystem
Link       L113               ExMinorSystem
Link       L114               ExMinorSystem
Link       L115               ExMinorSystem
Link       L116               ExMinorSystem
Link       L117               ExMinorSystem
Link       L118               ExMinorSystem
Link       L119               ExMinorSystem
Link       L120               ExMinorSystem
Link       L121               ExMinorSystem
Link       L122               ExMinorSystem
Link       L123               ExMinorSystem
Link       L124               ExMinorSystem
Link       L125               ExMinorSystem
Link       L126               ExMinorSystem
Link       L127               ExMinorSystem
Link       L128               ExMinorSystem
Link       L129               ExMinorSystem
Link       L130               ExMinorSystem
Link       L131               ExMinorSystem
Link       L138               FutMinor
Link       L139               FutMinor
Link       L140               ExMinorSystem
Link       L31                ExMinorSystem
Link       L32                ExMinorSystem
Link       L33                ExMinorSystem
Link       L34                ExMinorSystem
Link       L46-1              ExMinorSystem
```

Trails West: Cope Drive Units – PCSWMM Input Data

Design Storm: 100 Year 3-hour Chicago Storm

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Link       L46-2            ExMinorSystem
Link       L47-1            ExMinorSystem
Link       L47-2            ExMinorSystem
Link       L48              ExMinorSystem
Link       L49              ExMinorSystem
Link       L50              ExMinorSystem
Link       L56              ExMinorSystem
Link       L57              ExMinorSystem
Link       L59              ExMinorSystem
Link       L60              ExMinorSystem
Link       L83              ExMinorSystem
Link       L84              ExMinorSystem
Link       L85              ExMinorSystem
Link       L86              ExMinorSystem
Link       L87              ExMinorSystem
Link       L88              ExMinorSystem
Link       L89              ExMinorSystem
Link       L90              ExMinorSystem
Link       L91              ExMinorSystem
Link       L92              ExMinorSystem
Link       L93              ExMinorSystem
Link       L94              ExMinorSystem
Link       L95              ExMinorSystem
Link       L96              ExMinorSystem
Link       L97              ExMinorSystem
Link       L98              ExMinorSystem
Link       CB-102A-1        CB_Lead
Link       CB-304A-1        CB_Lead
Link       CB-304A-2        CB_Lead
Link       CB-306A-1        CB_Lead
Link       CB-306A-2        CB_Lead
Link       CB-310A-1        CB_Lead
Link       CB-310A-2        CB_Lead
Link       CB-502A-1        CB_Lead
Link       CB-504A-1        CB_Lead
Link       CB-504A-2        CB_Lead
Link       CB-506A-1        CB_Lead
Link       CB-506A-2        CB_Lead
Link       CB-508A-1        CB_Lead
Link       CB-508A-2        CB_Lead
Link       CB-512A-1        CB_Lead
Link       CB-512A-2        CB_Lead

[MAP]
DIMENSIONS       353854.75295     5015239.9928     354603.17205
5015858.5492
UNITS            Meters

[COORDINATES]
;;Node          X-Coord            Y-Coord
;;-------------- ------------------ ------------------
J1               354272.229         5015611.483
2005             354529.203         5015695.473
Diversion-1053   354335.15          5015642.12
OF1              354233.337         5015634.201
OF2              354262.841         5015622.535
OF3              354421.718         5015778.048
1001             354385.393         5015297.322
1002             354353.33          5015268.109
1004             354300.967         5015328.509
1005             354259.103         5015376.795
1006             354198.883         5015446.261
1006A            354198.87          5015454.32
1007             354427.973         5015327.365
1008             354403.791         5015350.159
1009             354366.514         5015385.297
1010             354311.938         5015445.19
1011             354258.95          5015506.403
1012             354225.97          5015544.818
1012A            354212.895         5015533.201
1012B            354193.631         5015516.358
1013             354067.827         5015475.072
1014             354122.432         5015526.35
1015             354193.424         5015586.291
1016             354243.699         5015631.745
1017             354436.696         5015334.927
1018             354490.164         5015381.283
1019             354568.148         5015451.67
102_(C-STRM-NEW) 354415.155         5015749.898
1020             354569.153         5015459.707
1021             354541.323         5015507.456
1022             354375.649         5015393.277
1023             354439.242         5015448.836
1024             354525.555         5015526.328
1025             354500.742         5015552.182
1026             354321.961         5015453.866
1027             354371.62          5015496.89
1028             354432.46          5015565.2
1029             354445.693         5015586.896
103_(C-STRM-NEW) 354405.408         5015746.199
1030             354267.749         5015514.037
1031             354316.816         5015556.579
1033             353889.421         5015807.011
1034             353888.772         5015794.1
1035             353957.659         5015714.641
1036             354001.186         5015753.48
1037             353909.973         5015826.122
1038             353943.526         5015830.433
1039             354021.224         5015793.638
104_(C-STRM-NEW) 354376.005         5015759.799
1040             354019.255         5015664.96
1041             354079.209         5015717.772
1042             354098.775         5015757.124
1043             354059.845         5015596.768
1043A            354096.159         5015554.876
1044             354070.364         5015606.007
1045             354146.306         5015672.707
1046             354171.206         5015723.593
1047             354225.919         5015698.925
1048             354280.692         5015674.946
1048A            354306.57          5015698.253
1049             354381.795         5015623.085
1050             354373.383         5015621.938
1051             354359.486         5015606.349
1052             354327.67          5015633.736
1053             354008.751         5015655.704
2000             354437.797         5015789.783
2001             354475.916         5015772.151
2002             354454.87          5015727.526
2003             354457.518         5015717.281
2004             354489.999         5015701.021
302_(C-STRM-NEW) 354297.481         5015632.549
303_(C-STRM-NEW) 354283.109         5015645.297
304_(C-STRM-NEW) 354272.849         5015604.78
305_(C-STRM-NEW) 354258.809         5015618.612
306_(C-STRM-NEW) 354245.757         5015580.526
307_(C-STRM-NEW) 354232.792         5015595.479
308_(C-STRM-NEW) 354251.512         5015573.888
309_(C-STRM-NEW) 354250.734         5015562.444
310_(C-STRM-NEW) 354247.064         5015559.262
502_(C-STRM-NEW) 354220.918         5015639.915
503_(C-STRM-NEW) 354209.51          5015640.727
504_(C-STRM-NEW) 354184.04          5015618.645
505_(C-STRM-NEW) 354197.61          5015602.994
506_(C-STRM-NEW) 354158.044         5015596.106
507_(C-STRM-NEW) 354171.62          5015580.448
508_(C-STRM-NEW) 354134.624         5015575.8
509_(C-STRM-NEW) 354148.043         5015560.324
510_(C-STRM-NEW) 354126.517         5015585.151
511_(C-STRM-NEW) 354114.777         5015585.987
512_(C-STRM-NEW) 354106.414         5015578.736
CB-102           354413.687         5015756.802
CB-304           354281.595         5015621.006
CB-306           354261.732         5015600.108
CB-310           354250.99          5015557.756
CB-502           354227.088         5015641.563
CB-504           354201.649         5015629.253
CB-506           354178.651         5015608.713
CB-508           354145.94          5015580.198
CB-512           354112.402         5015578.884
STM100           354426.849         5015775.696
STM301           354311.76          5015648.725
STM501           354234.87          5015623.797

[VERTICES]
;;Link          X-Coord            Y-Coord
;;-------------- ------------------ ------------------
C10              354256.037         5015560.777
C10              354254.789         5015574.983
C10              354246.634         5015586.869
C2               354116.234         5015581.123
C2               354124.22          5015580.471
C2               354132.388         5015569.725
C8               354211.044         5015636.302
C8               354211.531         5015636.549
CB102-A-2        354412.492         5015752.627
CB-304A-2        354279.497         5015613.857
CB-306A-2        354253.319         5015591.144
CB-310A-2        354248.842         5015556.275
CB-502A-1        354223.932         5015641.107
CB-504A-2        354194.509         5015621.114
CB-506A-2        354169.424         5015599.541
CB-508A-2        354141.199         5015575.683
CB-512A-2        354109.459         5015577.049

[POLYGONS]
;;Subcatchment  X-Coord            Y-Coord
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C102A            354421.663         5015753.632
C102A            354411.323         5015736.396
C102A            354411.323         5015736.396
C102A            354408.096         5015729.589
C102A            354408.096         5015729.589
C102A            354405.342         5015731.704
C102A            354405.342         5015731.704
C102A            354373.919         5015746.239
C102A            354373.919         5015746.239
C102A            354377.196         5015753.367
C102A            354377.196         5015753.367
C102A            354379.504         5015756.528
C102A            354379.504         5015756.528
C102A            354382.191         5015762.337
C102A            354382.191         5015762.337
C102A            354385.454         5015770.073
C102A            354385.454         5015770.073
C102A            354387.075         5015773.578
C102A            354387.075         5015773.578
C102A            354388.596         5015772.874
C102A            354388.596         5015772.874
C102A            354388.735         5015772.81
C102A            354388.735         5015772.81
C102A            354388.991         5015773.363
C102A            354388.991         5015773.363
C102A            354388.852         5015773.427
C102A            354388.852         5015773.427
C102A            354389.897         5015775.686
C102A            354389.897         5015775.686
C102A            354412.766         5015765.108
C102A            354412.766         5015765.108
C102A            354416.685         5015773.853
C102A            354416.685         5015773.853
C102A            354428.558         5015768.253
C102A            354428.558         5015768.253
C102A            354421.663         5015753.632
C304A            354272.538         5015633.703
C304A            354274.726         5015635.939
C304A            354274.726         5015635.939
C304A            354273.341         5015637.134
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C304A	354273.341	5015637.134
C304A	354275.903	5015640.022
C304A	354275.903	5015640.022
C304A	354281.672	5015644.569
C304A	354281.672	5015644.569
C304A	354284.772	5015648.063
C304A	354284.772	5015648.063
C304A	354287.122	5015649.357
C304A	354287.122	5015649.357
C304A	354290.042	5015652.648
C304A	354290.042	5015652.648
C304A	354305.306	5015639.109
C304A	354305.306	5015639.109
C304A	354310.077	5015640.86
C304A	354310.077	5015640.86
C304A	354316.539	5015635.127
C304A	354316.539	5015635.127
C304A	354314.199	5015632.338
C304A	354314.199	5015632.338
C304A	354300.005	5015616.336
C304A	354300.005	5015616.336
C304A	354283.782	5015598.048
C304A	354283.782	5015598.048
C304A	354275.433	5015605.735
C304A	354275.433	5015605.735
C304A	354273.204	5015607.743
C304A	354273.204	5015607.743
C304A	354263.758	5015616.123
C304A	354263.758	5015616.123
C304A	354257.751	5015621.823
C304A	354257.751	5015621.823
C304A	354259.877	5015624.214
C304A	354259.877	5015624.214
C304A	354266.666	5015629.609
C304A	354266.666	5015629.609
C304A	354269.228	5015632.497
C304A	354269.228	5015632.497
C304A	354270.579	5015631.265
C304A	354270.579	5015631.265
C304A	354272.538	5015633.703
C306A	354258.777	5015575.108
C306A	354254.826	5015579.49
C306A	354254.826	5015579.49
C306A	354253.798	5015578.732
C306A	354253.798	5015578.732
C306A	354251.38	5015576.636
C306A	354251.38	5015576.636
C306A	354245.912	5015582.942
C306A	354245.912	5015582.942
C306A	354235.794	5015594.612
C306A	354235.794	5015594.612
C306A	354238.212	5015596.708
C306A	354238.212	5015596.708
C306A	354238.177	5015601.242
C306A	354238.177	5015601.242
C306A	354241.22	5015604.553
C306A	354241.22	5015604.553
C306A	354244.137	5015607.082
C306A	354244.137	5015607.082
C306A	354245.335	5015605.7
C306A	354245.335	5015605.7
C306A	354250.018	5015609.76
C306A	354250.018	5015609.76
C306A	354248.82	5015611.142
C306A	354248.82	5015611.142
C306A	354251.737	5015613.671
C306A	354251.737	5015613.671
C306A	354254.104	5015617.711
C306A	354254.104	5015617.711
C306A	354257.751	5015621.823
C306A	354257.751	5015621.823
C306A	354263.758	5015616.123
C306A	354263.758	5015616.123
C306A	354273.204	5015607.743
C306A	354273.204	5015607.743
C306A	354275.433	5015605.735
C306A	354275.433	5015605.735
C306A	354283.782	5015598.048
C306A	354283.782	5015598.048
C306A	354279.277	5015593.067
C306A	354279.277	5015593.067
C306A	354258.777	5015575.108
C310A	354233.376	5015592.516
C310A	354235.794	5015594.612
C310A	354235.794	5015594.612
C310A	354245.912	5015582.942
C310A	354245.912	5015582.942
C310A	354251.38	5015576.636
C310A	354251.38	5015576.636
C310A	354253.798	5015578.732
C310A	354253.798	5015578.732
C310A	354254.826	5015579.49
C310A	354254.826	5015579.49
C310A	354258.777	5015575.108
C310A	354258.777	5015575.108
C310A	354266.578	5015565.527
C310A	354266.578	5015565.527
C310A	354244.797	5015546.642
C310A	354244.797	5015546.642
C310A	354240.623	5015551.427
C310A	354240.623	5015551.427
C310A	354238.526	5015553.845
C310A	354238.526	5015553.845
C310A	354235.418	5015558.468
C310A	354235.418	5015558.468
C310A	354238.336	5015560.997
C310A	354238.336	5015560.997
C310A	354237.118	5015562.362
C310A	354237.118	5015562.362
C310A	354239.579	5015564.294
C310A	354239.579	5015564.294
C310A	354223.073	5015583.331
C310A	354223.073	5015583.331
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C310A	354230.941	5015591.7
C310A	354230.941	5015591.7
C310A	354233.376	5015592.516
C502A	354217.639	5015622.196
C502A	354211.063	5015616.326
C502A	354211.063	5015616.326
C502A	354202.777	5015625.883
C502A	354202.777	5015625.883
C502A	354209.35	5015631.717
C502A	354209.35	5015631.717
C502A	354206.383	5015635.766
C502A	354206.383	5015635.766
C502A	354197.03	5015646.553
C502A	354197.03	5015646.553
C502A	354205.376	5015653.789
C502A	354205.376	5015653.789
C502A	354201.171	5015658.64
C502A	354201.171	5015658.64
C502A	354204.954	5015663.6
C502A	354204.954	5015663.6
C502A	354245.915	5015644.653
C502A	354245.915	5015644.653
C502A	354237.165	5015634.788
C502A	354237.165	5015634.788
C502A	354226.876	5015625.868
C502A	354226.876	5015625.868
C502A	354217.639	5015622.196
C504A	354199.733	5015608.025
C504A	354197.315	5015605.929
C504A	354197.315	5015605.929
C504A	354184.247	5015620.545
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C504A	354176.86	5015629.065
C504A	354176.86	5015629.065
C504A	354197.03	5015646.553
C504A	354197.03	5015646.553
C504A	354206.383	5015635.766
C504A	354206.383	5015635.766
C504A	354209.35	5015631.717
C504A	354209.35	5015631.717
C504A	354202.777	5015625.883
C504A	354202.777	5015625.883
C504A	354211.063	5015616.326
C504A	354211.063	5015616.326
C504A	354204.32	5015610.648
C504A	354204.32	5015610.648
C504A	354199.733	5015608.025
C506A	354173.737	5015585.486
C506A	354171.319	5015583.39
C506A	354171.319	5015583.39
C506A	354158.448	5015598.177
C506A	354158.448	5015598.177
C506A	354151.061	5015606.697
C506A	354151.061	5015606.697
C506A	354176.86	5015629.065
C506A	354176.86	5015629.065
C506A	354184.247	5015620.545
C506A	354184.247	5015620.545
C506A	354197.315	5015605.929
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C506A	354196.182	5015604.947
C506A	354196.182	5015604.947
C506A	354194.897	5015603.833
C506A	354194.897	5015603.833
C506A	354191.647	5015599.66
C506A	354191.647	5015599.66
C506A	354178.328	5015588.112
C506A	354178.328	5015588.112
C506A	354173.737	5015585.486
C508A	354146.464	5015561.84
C508A	354145.33	5015560.857
C508A	354145.33	5015560.857
C508A	354134.454	5015573.402
C508A	354134.454	5015573.402
C508A	354132.286	5015580.787
C508A	354132.286	5015580.787
C508A	354129.181	5015587.726
C508A	354129.181	5015587.726
C508A	354151.061	5015606.697
C508A	354151.061	5015606.697
C508A	354158.448	5015598.177
C508A	354158.448	5015598.177
C508A	354171.319	5015583.39
C508A	354171.319	5015583.39
C508A	354168.901	5015581.294
C508A	354168.901	5015581.294
C508A	354165.654	5015577.124
C508A	354165.654	5015577.124
C508A	354152.336	5015565.576
C508A	354152.336	5015565.576
C508A	354147.748	5015562.954
C508A	354147.748	5015562.954
C508A	354146.464	5015561.84
C512A	354106.523	5015572.61
C512A	354100.627	5015579.41
C512A	354100.627	5015579.41
C512A	354107.912	5015585.726
C512A	354107.912	5015585.726
C512A	354121.134	5015597.19

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C512A             354124.975         5015592.577
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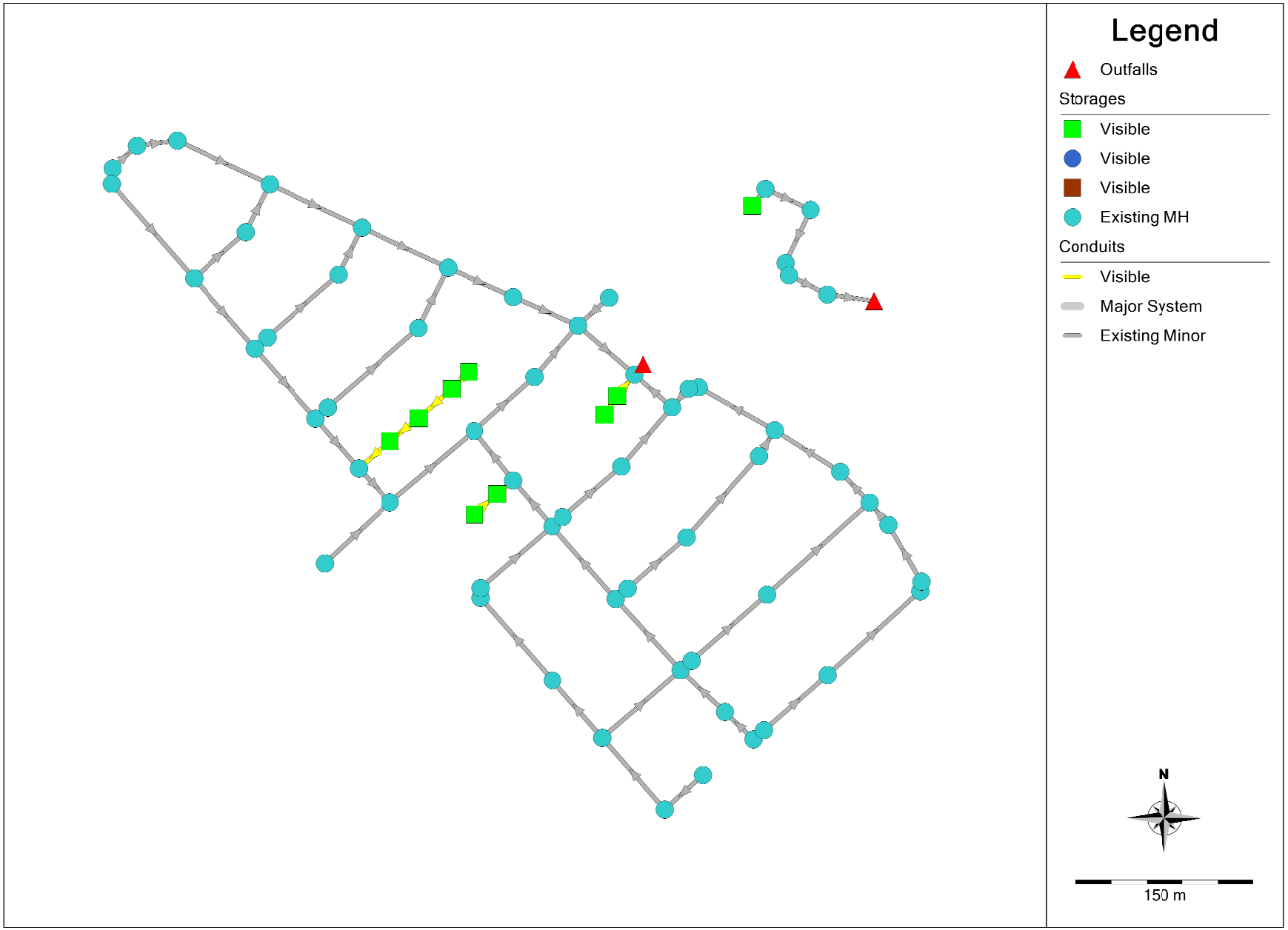
C512A             354129.181         5015587.726
C512A             354132.286         5015580.787
C512A             354132.286         5015580.787
C512A             354134.454         5015573.402
C512A             354134.454         5015573.402
C512A             354145.33          5015560.857
C512A             354145.33          5015560.857
C512A             354142.912         5015558.761
C512A             354142.912         5015558.761
C512A             354139.094         5015555.563
C512A             354139.094         5015555.563
C512A             354132.518         5015549.701
C512A             354132.518         5015549.701
C512A             354111.985         5015573.383
C512A             354111.985         5015573.383
C512A             354106.523         5015572.61

[SYMBOLS]
;;Gage            X-Coord            Y-Coord
;;--------------- ------------------ ------------------
```


Legend
Outfalls
Storages
Visible
Visible
Visible
Existing MH
Conduits
Visible
Major System
Existing Minor
N
150 m

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

```
[TITLE]
;;Project Title/Notes
Cope Drive Units
Option 1: Increase allowable minor system discharge
HGL-2007-100yr: Re-creation of 2007 subdivision HGL using DDSWMM
data files from Soho West Phase 1 and 2 (160400502)
v0: Original simulation
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[OPTIONS]
;;Option             Value
FLOW_UNITS          CMS
INFILTRATION        HORTON
FLOW_ROUTING        DYNWAVE
LINK_OFFSETS        ELEVATION
MIN_SLOPE           0
ALLOW_PONDING       NO
SKIP_STEADY_STATE   NO

START_DATE          02/10/2023
START_TIME          00:00:00
REPORT_START_DATE   02/10/2023
REPORT_START_TIME   00:00:00
END_DATE            02/11/2023
END_TIME            00:00:00
SWEEP_START         01/01
SWEEP_END           12/31
DRY_DAYS            0
REPORT_STEP         00:01:00
WET_STEP            00:05:00
DRY_STEP            00:05:00
ROUTING_STEP        5
RULE_STEP           00:00:00

INERTIAL_DAMPING    PARTIAL
NORMAL_FLOW_LIMITED BOTH
FORCE_MAIN_EQUATION H-W
VARIABLE_STEP       0
LENGTHENING_STEP    0
MIN_SURFAREA        0
MAX_TRIALS          8
HEAD_TOLERANCE      0.0015
SYS_FLOW_TOL        5
LAT_FLOW_TOL        5
MINIMUM_STEP        0.5
THREADS             4

[EVAPORATION]
;;Data Source    Parameters
;;-------------- ----------------
CONSTANT         0.0
DRY_ONLY         NO

[RAINGAGES]
;;Name           Format    Interval SCF      Source
;;-------------- --------- -------- -------- ----------
August4_1988     INTENSITY 0:05     1.0      TIMESERIES
August4_1988
August8_1996     INTENSITY 0:05     1.0      TIMESERIES
August8_1996
Chicago_100yr_3h INTENSITY 0:10     1.0      TIMESERIES
Chicago_100yr_3h
Chicago_100yr+20%_3h INTENSITY 0:10     1.0      TIMESERIES
Chicago_100yr+20%_3h
Chicago_2yr_3h   INTENSITY 0:10     1.0      TIMESERIES
Chicago_2yr_3h
Chicago_5yr_3h   INTENSITY 0:10     1.0      TIMESERIES
Chicago_5yr_3h
July1_1979       INTENSITY 1:00     1.0      TIMESERIES
July1_1979
SCS_Type_II_100yr_103.2mm INTENSITY 1:00     1.0      TIMESERIES
SCS_Type_II_100yr_103.2mm

[OUTFALLS]
;;Name           Elevation  Type       Stage Data       Gated
Route To
;;-------------- ---------- ---------- ---------------- --------
----------------
2005             93.73      FIXED      94.65            YES
Diversion-1053   93.09      FIXED      94.48            YES

[STORAGE]
;;Name           Elev.    MaxDepth   InitDepth  Shape      Curve
Name/Params            N/A      Fevap    Psi      Ksat     IMD
;;-------------- -------- ---------- ---------- ---------- ------
---------------------- -------- --------          -------- ------
--
1001             95.32    2.93       0          FUNCTIONAL 0
0        1.13    0        0
1002             95.07    2.96       0          FUNCTIONAL 0
0        1.13    0        0
1004             94.91    2.99       0          FUNCTIONAL 0
0        1.13    0        0
1005             94.67    3.23       0          FUNCTIONAL 0
0        1.13    0        0
1006             94.44    3.31       0          FUNCTIONAL 0
0        1.13    0        0
1006A            94.34    3.36       0          FUNCTIONAL 0
0        1.13    0        0
1007             95.16    2.84       0          FUNCTIONAL 0
0        1.13    0        0
1008             94.89    3.06       0          FUNCTIONAL 0
0        1.13    0        0
1009             94.69    3.06       0          FUNCTIONAL 0
0        1.13    0        0
1010             94.44    3.21       0          FUNCTIONAL 0
0        1.13    0        0
1011             94.11    3.29       0          FUNCTIONAL 0
0        1.13    0        0
;0.7
1012             93.91    3.31       0          FUNCTIONAL 0
0        1.13    0        0
1012A            94.67    2.82       0          FUNCTIONAL 0
0        1.13    0        0
1012B            94.83    2.65       0          FUNCTIONAL 0
0        1.13    0        0
;1.02
1013             93.61    2.99       0          FUNCTIONAL 0
0        1.13    0        0
;1.09
1014             93.53    3.29       0          FUNCTIONAL 0
0        1.13    0        0
;1.18
1015             93.43    3.48       0          FUNCTIONAL 0
0        1.13    0        0
;1.25
1016             93.33    3.45       0          FUNCTIONAL 0
0        1.13    0        0
1017             95.14    2.56       0          FUNCTIONAL 0
0        1.13    0        0
1018             94.85    2.95       0          FUNCTIONAL 0
0        1.13    0        0
1019             94.59    2.91       0          FUNCTIONAL 0
0        1.13    0        0
1020             94.49    2.96       0          FUNCTIONAL 0
0        1.13    0        0
1021             94.38    2.92       0          FUNCTIONAL 0
0        1.13    0        0
1022             94.88    2.62       0          FUNCTIONAL 0
0        1.13    0        0
1023             94.57    2.83       0          FUNCTIONAL 0
0        1.13    0        0
1024             94.18    3.02       0          FUNCTIONAL 0
0        1.13    0        0
1025             94.04    3.21       0          FUNCTIONAL 0
0        1.13    0        0
1026             94.76    2.79       0          FUNCTIONAL 0
0        1.13    0        0
1027             94.44    2.99       0          FUNCTIONAL 0
0        1.13    0        0
1028             94.18    2.92       0          FUNCTIONAL 0
0        1.13    0        0
1029             93.91    3.14       0          FUNCTIONAL 0
0        1.13    0        0
1030             94.38    2.82       0          FUNCTIONAL 0
0        1.13    0        0
1031             94.01    3.09       0          FUNCTIONAL 0
0        1.13    0        0
1033             95.23    2.4        0          FUNCTIONAL 0
0        1.13    0        0
1034             95.11    2.39       0          FUNCTIONAL 0
0        1.13    0        0
1035             94.8     2.45       0          FUNCTIONAL 0
0        1.13    0        0
1036             94.6     2.85       0          FUNCTIONAL 0
0        1.13    0        0
1037             95.13    2.47       0          FUNCTIONAL 0
0        1.13    0        0
1038             94.94    2.51       0          FUNCTIONAL 0
0        1.13    0        0
1039             94.46    2.94       0          FUNCTIONAL 0
0        1.13    0        0
1040             94.76    2.49       0          FUNCTIONAL 0
0        1.13    0        0
1041             94.48    2.72       0          FUNCTIONAL 0
0        1.13    0        0
1042             94.09    3.11       0          FUNCTIONAL 0
0        1.13    0        0
1043             94.44    2.69       0          FUNCTIONAL 0
0        1.13    0        0
;0.45
1043A            94.23    2.73       0          FUNCTIONAL 0
0        1.13    0        0
1043D            94.53    2.5        0          FUNCTIONAL 0
0        1.13    0        0
1043E            94.74    2.26       0          FUNCTIONAL 0
0        1.13    0        0
1043F            94.91    1.95       0          FUNCTIONAL 0
0        1.13    0        0
1044             94.65    2.45       0          FUNCTIONAL 0
0        1.13    0        0
1045             94.25    2.8        0          FUNCTIONAL 0
0        1.13    0        0
1046             93.86    2.84       0          FUNCTIONAL 0
0        1.13    0        0
;0.84
```

```
1047            93.74    2.93       0          FUNCTIONAL 0
0         1.13     0        0
;1.31
1048            93.24    3.26       0          FUNCTIONAL 0
0         1.13     0        0
;0.43
1048A           94.14    1.96       0          FUNCTIONAL 0
0         1.13     0        0
1049            93.72    3.18       0          FUNCTIONAL 0
0         1.13     0        0
1050            93.7     3.1        0          FUNCTIONAL 0
0         1.13     0        0
;0.99
1051            93.57    3.1        0          FUNCTIONAL 0
0         1.13     0        0
;1.4
1052            93.1     4          0          FUNCTIONAL 0
0         1.13     0        0
1052A           94.2     2.95       0          FUNCTIONAL 0
0         1.13     0        0
1052B           94.37    2.97       0          FUNCTIONAL 0
0         1.13     0        0
1053            94.72    2.58       0          FUNCTIONAL 0
0         1.13     0        0
2000            94.33    2.03       0          FUNCTIONAL 0
0         1.13     0        0
;94.74
2000A           94.79    1.98       0          FUNCTIONAL 0
0         1.13     0        0
2001            94.24    2.72       0          FUNCTIONAL 0
0         1.13     0        0
2002            94.14    3.47       0          FUNCTIONAL 0
0         1.13     0        0
2003            94.11    3.51       0          FUNCTIONAL 0
0         1.13     0        0
2004            93.87    3.56       0          FUNCTIONAL 0
0         1.13     0        0
CB1043G         95.14    1.78       0          FUNCTIONAL 0
0         1.13     0        0

[CONDUITS]
;;Name           From Node        To Node          Length
Roughness  InOffset   OutOffset  InitFlow   MaxFlow
;;-------------- ---------------- ---------------- ---------- ---
------- ---------- ---------- ---------- ----------
C68             1002             1004             79.944
0.013      95.07      94.91      0          0
L101            1004             1005             63.912
0.013      94.91      94.8       0          0
L102            1005             1006             91.941
0.013      94.67      94.44      0          0
L103A           1006             1006A            8.06
0.013      94.44      94.42      0          0
L103B           1006A            1011             79.518
0.013      94.34      94.18      0          0
L104            1004             1009             86.732
0.013      95.44      94.85      0          0
L105            1007             1008             33.234
0.013      95.16      95.04      0          0
L106            1009             1010             81.035
0.013      94.69      94.51      0          0
L107            1010             1011             80.967
0.013      94.44      94.26      0          0
L108            1030             1031             64.946
0.013      94.38      94.23      0          0
L109            1031             1051             65.562
0.013      94.01      93.88      0          0
L110            1033             1034             12.928
0.013      95.31      95.26      0          0
L111            1034             1035             105.17
0.013      95.11      94.8       0          0
L112            1035             1036             58.34
0.013      94.8       94.68      0          0
L113            1036             1039             44.883
0.013      94.6       94.53      0          0
L114            1039             1042             85.724
0.013      94.46      94.24      0          0
L115            1042             1046             79.822
0.013      94.09      93.93      0          0
L116            1046             1047             60.021
0.013      93.86      93.74      0          0
L117            1047             1048             59.797
0.013      93.74      93.61      0          0
L118            1033             1037             28.067
0.013      95.23      95.13      0          0
L119            1037             1038             33.831
0.013      95.13      95.02      0          0
L120            1038             1039             85.977
0.013      94.94      94.68      0          0
L121            1035             1053             78.006
0.013      94.99      94.79      0          0
L122            1053             1043             78.006
0.013      94.72      94.52      0          0
L123            1043             1043A            55.446
0.013      94.44      94.31      0          0
L124            1043A            1014             38.784
0.013      94.23      94.13      0          0
L125            1040             1041             79.903
0.013      94.76      94.56      0          0
L126            1041             1042             43.951
0.013      94.48      94.39      0          0
L127            1044             1045             101.082
0.013      94.65      94.4       0          0
L128            1045             1046             56.656
0.013      94.25      94.16      0          0
L129            1008             1009             51.231
0.013      94.89      94.76      0          0
L130            1025             1029             65.085
0.013      94.04      93.91      0          0
L131            1016             1048             60.5
0.013      93.33      93.24      0          0
L133            CB1043G          1043F            20.325
0.013      95.14      94.96      0          0
L134            1043F            1043E            36.739
0.013      94.91      94.74      0          0
L135            1043E            1043D            31.375
0.013      94.74      94.6       0          0
L136            1043D            1043A            34.668
0.013      94.53      94.46      0          0
L138            1012B            1012A            25.59
0.013      94.83      94.67      0          0
L139            1012A            1012             17.492
0.013      94.67      94.43      0          0
L140            1048A            1048             34.829
0.013      94.14      94.06      0          0
L141            1052B            1052A            18.894
0.013      94.37      94.2       0          0
L142            1052A            1052             23.01
0.013      94.2       93.96      0          0
L31             2001             2002             49.342
0.013      94.24      94.14      0          0
L32             2002             2003             10.582
0.013      94.14      94.11      0          0
L33             2003             2004             36.326
0.013      94.11      93.95      0          0
L34             2004             2005             39.598
0.013      93.87      93.73      0          0
L46             1015             1016             67.781
0.013      93.43      93.33      0          0
L47             1048             1052             62.496
0.013      93.24      93.13      0          0
L48             1052             Diversion-1053   11.237
0.013      93.1       93.09      0          0
L49             1013             1014             74.913
0.013      93.61      93.53      0          0
L50             1014             1015             92.1
0.013      93.53      93.43      0          0
L56             2000             2001             42.002
0.013      94.33      94.24      0          0
L57             2000A            2000             17.842
0.013      94.79      94.48      0          0
L59             1011             1012             50.634
0.013      94.11      93.98      0          0
L60             1012             1015             52.722
0.013      93.91      93.8       0          0
L83             1017             1018             70.77
0.013      95.14      94.93      0          0
L84             1018             1019             105.059
0.013      94.85      94.59      0          0
L85             1019             1020             8.1
0.013      94.59      94.57      0          0
L86             1020             1021             55.271
0.013      94.49      94.38      0          0
L87             1021             1024             24.594
0.013      94.38      94.33      0          0
L88             1024             1025             35.837
0.013      94.18      94.11      0          0
L89             1029             1049             73.44
0.013      93.91      93.72      0          0
L90             1049             1050             8.491
0.013      93.72      93.7       0          0
L91             1050             1051             20.886
0.013      93.7       93.65      0          0
L92             1051             1052             41.983
0.013      93.57      93.43      0          0
L93             1022             1023             84.451
0.013      94.88      94.72      0          0
L94             1023             1024             116.004
0.013      94.57      94.33      0          0
L95             1026             1027             65.709
0.013      94.76      94.59      0          0
L96             1027             1028             91.482
0.013      94.44      94.26      0          0
L97             1028             1029             25.415
0.013      94.18      94.13      0          0
L98             1001             1002             43.379
0.013      95.32      95.22      0          0

[XSECTIONS]
;;Link           Shape        Geom1            Geom2      Geom3
Geom4      Barrels    Culvert
;;-------------- ------------ ---------------- ---------- -------
--- ---------- ---------- ----------
C68             CIRCULAR     0.525            0          0
0          1
L101            CIRCULAR     0.525            0          0
0          1
L102            CIRCULAR     0.6              0          0
0          1
L103A           CIRCULAR     0.6              0          0
0          1
L103B           CIRCULAR     0.675            0          0
0          1
L104            CIRCULAR     0.375            0          0
0          1
L105            CIRCULAR     0.3              0          0
0          1
L106            CIRCULAR     0.525            0          0
0          1
L107            CIRCULAR     0.6              0          0
0          1
L108            CIRCULAR     0.375            0          0
0          1
L109            CIRCULAR     0.6              0          0
0          1
L110            CIRCULAR     0.3              0          0
0          1
```

```
L111            CIRCULAR     0.45            0          0
0          1
L112            CIRCULAR     0.45            0          0
0          1
L113            CIRCULAR     0.525           0          0
0          1
L114            CIRCULAR     0.6             0          0
0          1
L115            CIRCULAR     0.75            0          0
0          1
L116            CIRCULAR     0.825           0          0
0          1
L117            CIRCULAR     0.825           0          0
0          1
L118            CIRCULAR     0.3             0          0
0          1
L119            CIRCULAR     0.3             0          0
0          1
L120            CIRCULAR     0.375           0          0
0          1
L121            CIRCULAR     0.375           0          0
0          1
L122            CIRCULAR     0.45            0          0
0          1
L123            CIRCULAR     0.525           0          0
0          1
L124            CIRCULAR     0.6             0          0
0          1
L125            CIRCULAR     0.375           0          0
0          1
L126            CIRCULAR     0.45            0          0
0          1
L127            CIRCULAR     0.375           0          0
0          1
L128            CIRCULAR     0.525           0          0
0          1
L129            CIRCULAR     0.45            0          0
0          1
L130            CIRCULAR     0.825           0          0
0          1
L131            RECT_CLOSED  1.2             1.8        0
0          1
L133            CIRCULAR     0.25            0          0
0          1
L134            CIRCULAR     0.3             0          0
0          1
L135            CIRCULAR     0.3             0          0
0          1
L136            CIRCULAR     0.375           0          0
0          1
L138            CIRCULAR     0.3             0          0
0          1
L139            CIRCULAR     0.3             0          0
0          1
L140            CIRCULAR     0.375           0          0
0          1
L141            CIRCULAR     0.375           0          0
0          1
L142            CIRCULAR     0.375           0          0
0          1
L31             CIRCULAR     0.45            0          0
0          1
L32             CIRCULAR     0.45            0          0
0          1
L33             CIRCULAR     0.45            0          0
0          1
L34             CIRCULAR     0.525           0          0
0          1
L46             RECT_CLOSED  1.2             1.8        0
0          1
L47             RECT_CLOSED  1.2             1.8        0
0          1
L48             RECT_CLOSED  1.2             2.4        0
0          1
L49             RECT_CLOSED  1.2             1.8        0
0          1
L50             RECT_CLOSED  1.2             1.8        0
0          1
L56             CIRCULAR     0.45            0          0
0          1
L57             CIRCULAR     0.3             0          0
0          1
L59             CIRCULAR     0.75            0          0
0          1
L60             CIRCULAR     0.825           0          0
0          1
L83             CIRCULAR     0.45            0          0
0          1
L84             CIRCULAR     0.525           0          0
0          1
L85             CIRCULAR     0.525           0          0
0          1
L86             CIRCULAR     0.6             0          0
0          1
L87             CIRCULAR     0.6             0          0
0          1
L88             CIRCULAR     0.75            0          0
0          1
L89             CIRCULAR     0.825           0          0
0          1
L90             CIRCULAR     0.825           0          0
0          1
L91             CIRCULAR     0.825           0          0
0          1
L92             CIRCULAR     0.9             0          0
0          1
L93             CIRCULAR     0.45            0          0
0          1
L94             CIRCULAR     0.6             0          0
0          1
L95             CIRCULAR     0.375           0          0
0          1
L96             CIRCULAR     0.525           0          0
0          1
L97             CIRCULAR     0.6             0          0
0          1
L98             CIRCULAR     0.375           0          0
0          1

[TRANSECTS]
;;Transect Data in HEC-2 format
;
NC 0.025    0.025    0.013
X1 18mROW            7        4.75     13.25    0.0      0.0
0.0      0.0      0.0
GR 0.3      0        0.15     4.75     0        4.75     0.13
9        0        13.25
GR 0.15     13.25    0.3      18

[LOSSES]
;;Link            Kentry     Kexit      Kavg       Flap Gate
Seepage
;;--------------- ---------- ---------- ---------- ---------- ----
------
L142             0          0.4        0          NO         0
L47              0          0.4        0          NO         0
L92              0          0.4        0          NO         0

[INFLOWS]
;;Node            Constituent      Time Series      Type
Mfactor  Sfactor  Baseline Pattern
;;--------------- ---------------- ---------------- -------- -----
--- -------- -------- --------
1001             FLOW             1001             FLOW     1.0
1        0
1002             FLOW             1002             FLOW     1.0
1        0
1004             FLOW             1004             FLOW     1.0
1        0
1005             FLOW             1005             FLOW     1.0
1        0
1006             FLOW             1006             FLOW     1.0
1        0
1008             FLOW             1008             FLOW     1.0
1        0
1009             FLOW             1009             FLOW     1.0
1        0
1010             FLOW             1010             FLOW     1.0
1        0
1011             FLOW             1011             FLOW     1.0
1        0
1012A            FLOW             1012A            FLOW     1.0
1
1012B            FLOW             1012B            FLOW     1.0
1
1013             FLOW             1013             FLOW     1.0
1
1014             FLOW             1014             FLOW     1.0
1        0
1015             FLOW             1015             FLOW     1.0
1        0
1016             FLOW             1016             FLOW     1.0
1        0
1017             FLOW             1017             FLOW     1.0
1        0
1018             FLOW             1018             FLOW     1.0
1        0
1020             FLOW             1020             FLOW     1.0
1        0
1022             FLOW             1022             FLOW     1.0
1        0
1023             FLOW             1023             FLOW     1.0
1        0
1025             FLOW             1025             FLOW     1.0
1        0
1026             FLOW             1026             FLOW     1.0
1        0
1027             FLOW             1027             FLOW     1.0
1        0
1028             FLOW             1028             FLOW     1.0
1        0
1030             FLOW             1030             FLOW     1.0
1        0
1031             FLOW             1031             FLOW     1.0
1        0
1034             FLOW             1034             FLOW     1.0
1        0
1035             FLOW             1035             FLOW     1.0
1        0
1036             FLOW             1036             FLOW     1.0
1        0
1038             FLOW             1038             FLOW     1.0
1        0
1039             FLOW             1039             FLOW     1.0
1        0
1043             FLOW             1043             FLOW     1.0
1        0
1043D            FLOW             1043D            FLOW     1.0
1
1043E            FLOW             1043E            FLOW     1.0
1
1043F            FLOW             1043F            FLOW     1.0
1
1044             FLOW             1044             FLOW     1.0
1        0
1045             FLOW             1045             FLOW     1.0
1        0
```

```
1046            FLOW            1046            FLOW    1.0
1       0
1047            FLOW            1047            FLOW    1.0
1       0
1048A           FLOW            1048A           FLOW    1.0
1
1051            FLOW            1051            FLOW    1.0
1       0
1052A           FLOW            1052A           FLOW    1.0
1
1052B           FLOW            1052B           FLOW    1.0
1
1053            FLOW            1053            FLOW    1.0
1       0
2000            FLOW            2000            FLOW    1.0
1
2000A           FLOW            2000A           FLOW    1.0
1
2001            FLOW            2001            FLOW    1.0
1
2004            FLOW            2004            FLOW    1.0
1
CB1043G         FLOW            1043G           FLOW    1.0
1

[CURVES]
;;Name           Type       X-Value    Y-Value
;;-------------- ---------- ---------- ----------
blk104-control   Rating     0          0
blk104-control              1.38       0.044
blk104-control              1.54       0.044
blk104-control              1.64       0.044

Curve1           Storage    0          0
Curve1                      1.38       0
Curve1                      1.52       93.1

Curve2           Storage    0          0
Curve2                      1.38       0
Curve2                      1.58       177.9

Curve3           Storage    0          0
Curve3                      1.38       0
Curve3                      1.49       96.1

Curve4           Storage    0          0
Curve4                      1.38       0
Curve4                      1.49       87.7

Curve5           Storage    0          0
Curve5                      1.38       0
Curve5                      1.57       287.8

Curve6           Storage    0          0
Curve6                      1.38       0
Curve6                      1.49       87.1

Curve7           Storage    0          0
Curve7                      1.38       0
Curve7                      1.58       258.5

Curve8           Storage    0          0
Curve8                      1.38       0
Curve8                      1.54       165.2

[TIMESERIES]
;;Name           Date       Time       Value
;;-------------- ---------- ---------- ----------
1001                        0:00       0
1001                        0:10       0
1001                        0:20       0
1001                        0:30       0.001
1001                        0:40       0.002
1001                        0:50       0.017
1001                        1:00       0.022
1001                        1:10       0.022
1001                        1:20       0.022
1001                        1:30       0.022
1001                        1:40       0.012
1001                        1:50       0.008
1001                        2:00       0.005
1001                        2:10       0.004
1001                        2:20       0.003
1001                        2:30       0.003
1001                        2:40       0.002
1001                        2:50       0.002
1001                        3:00       0.002
1001                        3:10       0.002
1001                        3:20       0.002
1001                        3:30       0.001
1001                        3:40       0.001
1001                        3:50       0.001
1001                        4:00       0.001
1001                        4:10       0.001
1001                        4:20       0.001
1001                        4:30       0.001
1001                        4:40       0.001
1001                        4:50       0.001
1001                        5:00       0
1001                        5:10       0
1001                        5:20       0
1001                        5:30       0
1001                        5:40       0
1001                        5:50       0
1001                        6:00       0
1001                        6:10       0
1001                        6:20       0
1001                        6:30       0
1001                        6:40       0
1001                        6:50       0
1001                        7:00       0
1001                        7:10       0
1001                        7:20       0
1001                        7:30       0
1001                        7:40       0
1001                        7:50       0
1001                        8:00       0
1001                        8:10       0
1001                        8:20       0
1001                        8:30       0
1001                        8:40       0
1001                        8:50       0
1001                        9:00       0
1001                        9:10       0
1001                        9:20       0
1001                        9:30       0
1001                        9:40       0
1001                        9:50       0
1001                        10:00      0
1001                        10:10      0
1001                        10:20      0
1001                        10:30      0
1001                        10:40      0
1001                        10:50      0
1001                        11:00      0
1001                        11:10      0
1001                        11:20      0
1001                        11:30      0
1001                        11:40      0
1001                        11:50      0
1001                        12:00      0
1001                        12:10      0
1001                        12:20      0
1001                        12:30      0
1001                        12:40      0
1001                        12:50      0
1001                        13:00      0
1001                        13:10      0

1002                        0:00       0
1002                        0:10       0
1002                        0:20       0.001
1002                        0:30       0.005
1002                        0:40       0.011
1002                        0:50       0.022
1002                        1:00       0.044
1002                        1:10       0.044
1002                        1:20       0.039
1002                        1:30       0.033
1002                        1:40       0.025
1002                        1:50       0.022
1002                        2:00       0.017
1002                        2:10       0.014
1002                        2:20       0.012
1002                        2:30       0.011
1002                        2:40       0.009
1002                        2:50       0.008
1002                        3:00       0.008
1002                        3:10       0.007
1002                        3:20       0.005
1002                        3:30       0.005
1002                        3:40       0.004
1002                        3:50       0.003
1002                        4:00       0.003
1002                        4:10       0.002
1002                        4:20       0.002
1002                        4:30       0.002
1002                        4:40       0.002
1002                        4:50       0.001
1002                        5:00       0.001
1002                        5:10       0.001
1002                        5:20       0.001
1002                        5:30       0.001
1002                        5:40       0.001
1002                        5:50       0.001
1002                        6:00       0.001
1002                        6:10       0.001
1002                        6:20       0.001
1002                        6:30       0.001
1002                        6:40       0.001
1002                        6:50       0.001
1002                        7:00       0.001
1002                        7:10       0.001
1002                        7:20       0.001
1002                        7:30       0.001
1002                        7:40       0.001
1002                        7:50       0.001
1002                        8:00       0.001
1002                        8:10       0
1002                        8:20       0
1002                        8:30       0
1002                        8:40       0
1002                        8:50       0
1002                        9:00       0
1002                        9:10       0
1002                        9:20       0
1002                        9:30       0
1002                        9:40       0
1002                        9:50       0
1002                        10:00      0
1002                        10:10      0
1002                        10:20      0
1002                        10:30      0
1002                        10:40      0
1002                        10:50      0
1002                        11:00      0
1002                        11:10      0
1002                        11:20      0
```

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1002	11:30	0
1002	11:40	0
1002	11:50	0
1002	12:00	0
1002	12:10	0
1002	12:20	0
1002	12:30	0
1002	12:40	0
1002	12:50	0
1002	13:00	0
1002	13:10	0
1004	0:00	0
1004	0:10	0
1004	0:20	0.002
1004	0:30	0.006
1004	0:40	0.014
1004	0:50	0.033
1004	1:00	0.044
1004	1:10	0.042
1004	1:20	0.024
1004	1:30	0.016
1004	1:40	0.01
1004	1:50	0.008
1004	2:00	0.006
1004	2:10	0.005
1004	2:20	0.005
1004	2:30	0.004
1004	2:40	0.004
1004	2:50	0.004
1004	3:00	0.003
1004	3:10	0.003
1004	3:20	0.002
1004	3:30	0.001
1004	3:40	0.001
1004	3:50	0.001
1004	4:00	0.001
1004	4:10	0.001
1004	4:20	0.001
1004	4:30	0.001
1004	4:40	0.001
1004	4:50	0.001
1004	5:00	0.001
1004	5:10	0
1004	5:20	0
1004	5:30	0
1004	5:40	0
1004	5:50	0
1004	6:00	0
1004	6:10	0
1004	6:20	0
1004	6:30	0
1004	6:40	0
1004	6:50	0
1004	7:00	0
1004	7:10	0
1004	7:20	0
1004	7:30	0
1004	7:40	0
1004	7:50	0
1004	8:00	0
1004	8:10	0
1004	8:20	0
1004	8:30	0
1004	8:40	0
1004	8:50	0
1004	9:00	0
1004	9:10	0
1004	9:20	0
1004	9:30	0
1004	9:40	0
1004	9:50	0
1004	10:00	0
1004	10:10	0
1004	10:20	0
1004	10:30	0
1004	10:40	0
1004	10:50	0
1004	11:00	0
1004	11:10	0
1004	11:20	0
1004	11:30	0
1004	11:40	0
1004	11:50	0
1004	12:00	0
1004	12:10	0
1004	12:20	0
1004	12:30	0
1004	12:40	0
1004	12:50	0
1004	13:00	0
1004	13:10	0
1005	0:00	0
1005	0:10	0
1005	0:20	0.001
1005	0:30	0.004
1005	0:40	0.009
1005	0:50	0.024
1005	1:00	0.044
1005	1:10	0.044
1005	1:20	0.034
1005	1:30	0.026
1005	1:40	0.019
1005	1:50	0.015
1005	2:00	0.011
1005	2:10	0.009
1005	2:20	0.008
1005	2:30	0.007
1005	2:40	0.006
1005	2:50	0.005
1005	3:00	0.005
1005	3:10	0.004
1005	3:20	0.004
1005	3:30	0.003
1005	3:40	0.002
1005	3:50	0.002
1005	4:00	0.002
1005	4:10	0.001
1005	4:20	0.001
1005	4:30	0.001
1005	4:40	0.001
1005	4:50	0.001
1005	5:00	0.001
1005	5:10	0.001
1005	5:20	0.001
1005	5:30	0.001
1005	5:40	0.001
1005	5:50	0.001
1005	6:00	0.001
1005	6:10	0.001
1005	6:20	0.001
1005	6:30	0.001
1005	6:40	0
1005	6:50	0
1005	7:00	0
1005	7:10	0
1005	7:20	0
1005	7:30	0
1005	7:40	0
1005	7:50	0
1005	8:00	0
1005	8:10	0
1005	8:20	0
1005	8:30	0
1005	8:40	0
1005	8:50	0
1005	9:00	0
1005	9:10	0
1005	9:20	0
1005	9:30	0
1005	9:40	0
1005	9:50	0
1005	10:00	0
1005	10:10	0
1005	10:20	0
1005	10:30	0
1005	10:40	0
1005	10:50	0
1005	11:00	0
1005	11:10	0
1005	11:20	0
1005	11:30	0
1005	11:40	0
1005	11:50	0
1005	12:00	0
1005	12:10	0
1005	12:20	0
1005	12:30	0
1005	12:40	0
1005	12:50	0
1005	13:00	0
1005	13:10	0
1006	0:00	0
1006	0:10	0
1006	0:20	0.004
1006	0:30	0.015
1006	0:40	0.034
1006	0:50	0.095
1006	1:00	0.11
1006	1:10	0.095
1006	1:20	0.063
1006	1:30	0.034
1006	1:40	0.019
1006	1:50	0.017
1006	2:00	0.012
1006	2:10	0.011
1006	2:20	0.01
1006	2:30	0.009
1006	2:40	0.008
1006	2:50	0.007
1006	3:00	0.007
1006	3:10	0.005
1006	3:20	0.004
1006	3:30	0.003
1006	3:40	0.002
1006	3:50	0.002
1006	4:00	0.002
1006	4:10	0.002
1006	4:20	0.002
1006	4:30	0.001
1006	4:40	0.001
1006	4:50	0.001
1006	5:00	0.001
1006	5:10	0.001
1006	5:20	0.001
1006	5:30	0.001
1006	5:40	0.001
1006	5:50	0.001
1006	6:00	0.001
1006	6:10	0.001
1006	6:20	0.001
1006	6:30	0.001
1006	6:40	0.001
1006	6:50	0.001
1006	7:00	0.001
1006	7:10	0.001

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1006	7:20	0.001
1006	7:30	0.001
1006	7:40	0.001
1006	7:50	0
1006	8:00	0
1006	8:10	0
1006	8:20	0
1006	8:30	0
1006	8:40	0
1006	8:50	0
1006	9:00	0
1006	9:10	0
1006	9:20	0
1006	9:30	0
1006	9:40	0
1006	9:50	0
1006	10:00	0
1006	10:10	0
1006	10:20	0
1006	10:30	0
1006	10:40	0
1006	10:50	0
1006	11:00	0
1006	11:10	0
1006	11:20	0
1006	11:30	0
1006	11:40	0
1006	11:50	0
1006	12:00	0
1006	12:10	0
1006	12:20	0
1006	12:30	0
1006	12:40	0
1006	12:50	0
1006	13:00	0
1006	13:10	0
1008	0:00	0
1008	0:10	0
1008	0:20	0.001
1008	0:30	0.006
1008	0:40	0.011
1008	0:50	0.044
1008	1:00	0.066
1008	1:10	0.066
1008	1:20	0.065
1008	1:30	0.053
1008	1:40	0.027
1008	1:50	0.018
1008	2:00	0.011
1008	2:10	0.009
1008	2:20	0.007
1008	2:30	0.007
1008	2:40	0.006
1008	2:50	0.005
1008	3:00	0.005
1008	3:10	0.004
1008	3:20	0.003
1008	3:30	0.003
1008	3:40	0.002
1008	3:50	0.002
1008	4:00	0.002
1008	4:10	0.001
1008	4:20	0.001
1008	4:30	0.001
1008	4:40	0.001
1008	4:50	0.001
1008	5:00	0.001
1008	5:10	0.001
1008	5:20	0.001
1008	5:30	0.001
1008	5:40	0.001
1008	5:50	0.001
1008	6:00	0.001
1008	6:10	0
1008	6:20	0
1008	6:30	0
1008	6:40	0
1008	6:50	0
1008	7:00	0
1008	7:10	0
1008	7:20	0
1008	7:30	0
1008	7:40	0
1008	7:50	0
1008	8:00	0
1008	8:10	0
1008	8:20	0
1008	8:30	0
1008	8:40	0
1008	8:50	0
1008	9:00	0
1008	9:10	0
1008	9:20	0
1008	9:30	0
1008	9:40	0
1008	9:50	0
1008	10:00	0
1008	10:10	0
1008	10:20	0
1008	10:30	0
1008	10:40	0
1008	10:50	0
1008	11:00	0
1008	11:10	0
1008	11:20	0
1008	11:30	0
1008	11:40	0
1008	11:50	0
1008	12:00	0
1008	12:10	0
1008	12:20	0
1008	12:30	0
1008	12:40	0
1008	12:50	0
1008	13:00	0
1008	13:10	0
1009	0:00	0
1009	0:10	0
1009	0:20	0.001
1009	0:30	0.004
1009	0:40	0.008
1009	0:50	0.044
1009	1:00	0.043
1009	1:10	0.03
1009	1:20	0.016
1009	1:30	0.012
1009	1:40	0.006
1009	1:50	0.006
1009	2:00	0.003
1009	2:10	0.003
1009	2:20	0.003
1009	2:30	0.003
1009	2:40	0.002
1009	2:50	0.002
1009	3:00	0.002
1009	3:10	0.001
1009	3:20	0.001
1009	3:30	0.001
1009	3:40	0.001
1009	3:50	0.001
1009	4:00	0.001
1009	4:10	0.001
1009	4:20	0
1009	4:30	0
1009	4:40	0
1009	4:50	0
1009	5:00	0
1009	5:10	0
1009	5:20	0
1009	5:30	0
1009	5:40	0
1009	5:50	0
1009	6:00	0
1009	6:10	0
1009	6:20	0
1009	6:30	0
1009	6:40	0
1009	6:50	0
1009	7:00	0
1009	7:10	0
1009	7:20	0
1009	7:30	0
1009	7:40	0
1009	7:50	0
1009	8:00	0
1009	8:10	0
1009	8:20	0
1009	8:30	0
1009	8:40	0
1009	8:50	0
1009	9:00	0
1009	9:10	0
1009	9:20	0
1009	9:30	0
1009	9:40	0
1009	9:50	0
1009	10:00	0
1009	10:10	0
1009	10:20	0
1009	10:30	0
1009	10:40	0
1009	10:50	0
1009	11:00	0
1009	11:10	0
1009	11:20	0
1009	11:30	0
1009	11:40	0
1009	11:50	0
1009	12:00	0
1009	12:10	0
1009	12:20	0
1009	12:30	0
1009	12:40	0
1009	12:50	0
1009	13:00	0
1009	13:10	0
1010	0:00	0
1010	0:10	0
1010	0:20	0.001
1010	0:30	0.009
1010	0:40	0.021
1010	0:50	0.052
1010	1:00	0.054
1010	1:10	0.049
1010	1:20	0.047
1010	1:30	0.028
1010	1:40	0.016
1010	1:50	0.013
1010	2:00	0.01
1010	2:10	0.008
1010	2:20	0.007
1010	2:30	0.006
1010	2:40	0.006
1010	2:50	0.005
1010	3:00	0.005

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

```
1010                    3:10    0.004
1010                    3:20    0.003
1010                    3:30    0.002
1010                    3:40    0.002
1010                    3:50    0.002
1010                    4:00    0.001
1010                    4:10    0.001
1010                    4:20    0.001
1010                    4:30    0.001
1010                    4:40    0.001
1010                    4:50    0.001
1010                    5:00    0.001
1010                    5:10    0.001
1010                    5:20    0.001
1010                    5:30    0.001
1010                    5:40    0.001
1010                    5:50    0.001
1010                    6:00    0.001
1010                    6:10    0.001
1010                    6:20    0.001
1010                    6:30    0.001
1010                    6:40    0
1010                    6:50    0
1010                    7:00    0
1010                    7:10    0
1010                    7:20    0
1010                    7:30    0
1010                    7:40    0
1010                    7:50    0
1010                    8:00    0
1010                    8:10    0
1010                    8:20    0
1010                    8:30    0
1010                    8:40    0
1010                    8:50    0
1010                    9:00    0
1010                    9:10    0
1010                    9:20    0
1010                    9:30    0
1010                    9:40    0
1010                    9:50    0
1010                    10:00   0
1010                    10:10   0
1010                    10:20   0
1010                    10:30   0
1010                    10:40   0
1010                    10:50   0
1010                    11:00   0
1010                    11:10   0
1010                    11:20   0
1010                    11:30   0
1010                    11:40   0
1010                    11:50   0
1010                    12:00   0
1010                    12:10   0
1010                    12:20   0
1010                    12:30   0
1010                    12:40   0
1010                    12:50   0
1010                    13:00   0
1010                    13:10   0

1011                    0:00    0
1011                    0:10    0
1011                    0:20    0
1011                    0:30    0.002
1011                    0:40    0.005
1011                    0:50    0.028
1011                    1:00    0.032
1011                    1:10    0.027
1011                    1:20    0.018
1011                    1:30    0.008
1011                    1:40    0.004
1011                    1:50    0.003
1011                    2:00    0.003
1011                    2:10    0.002
1011                    2:20    0.002
1011                    2:30    0.002
1011                    2:40    0.002
1011                    2:50    0.001
1011                    3:00    0.001
1011                    3:10    0.001
1011                    3:20    0.001
1011                    3:30    0.001
1011                    3:40    0.001
1011                    3:50    0.001
1011                    4:00    0.001
1011                    4:10    0
1011                    4:20    0
1011                    4:30    0
1011                    4:40    0
1011                    4:50    0
1011                    5:00    0
1011                    5:10    0
1011                    5:20    0
1011                    5:30    0
1011                    5:40    0
1011                    5:50    0
1011                    6:00    0
1011                    6:10    0
1011                    6:20    0
1011                    6:30    0
1011                    6:40    0
1011                    6:50    0
1011                    7:00    0
1011                    7:10    0
1011                    7:20    0
1011                    7:30    0
1011                    7:40    0
1011                    7:50    0
1011                    8:00    0
1011                    8:10    0
1011                    8:20    0
1011                    8:30    0
1011                    8:40    0
1011                    8:50    0
1011                    9:00    0
1011                    9:10    0
1011                    9:20    0
1011                    9:30    0
1011                    9:40    0
1011                    9:50    0
1011                    10:00   0
1011                    10:10   0
1011                    10:20   0
1011                    10:30   0
1011                    10:40   0
1011                    10:50   0
1011                    11:00   0
1011                    11:10   0
1011                    11:20   0
1011                    11:30   0
1011                    11:40   0
1011                    11:50   0
1011                    12:00   0
1011                    12:10   0
1011                    12:20   0
1011                    12:30   0
1011                    12:40   0
1011                    12:50   0
1011                    13:00   0
1011                    13:10   0

;Design inflow to MH1012 (1012A)  from Oct 2007 Ph1 Subdivision
design
1012A                   0:00    0
1012A                   0:10    0
1012A                   0:20    0
1012A                   0:30    0
1012A                   0:40    0.001
1012A                   0:50    0.005
1012A                   1:00    0.018
1012A                   1:10    0.022
1012A                   1:20    0.022
1012A                   1:30    0.022
1012A                   1:40    0.021
1012A                   1:50    0.018
1012A                   2:00    0.016
1012A                   2:10    0.014
1012A                   2:20    0.012
1012A                   2:30    0.01
1012A                   2:40    0.009
1012A                   2:50    0.008
1012A                   3:00    0.008
1012A                   3:10    0.007
1012A                   3:20    0.006
1012A                   3:30    0.006
1012A                   3:40    0.006
1012A                   3:50    0.005
1012A                   4:00    0.005
1012A                   4:10    0.005
1012A                   4:20    0.005
1012A                   4:30    0.004
1012A                   4:40    0.004
1012A                   4:50    0.004
1012A                   5:00    0.004
1012A                   5:10    0.004
1012A                   5:20    0.003
1012A                   5:30    0.003
1012A                   5:40    0.003
1012A                   5:50    0.003
1012A                   6:00    0.003
1012A                   6:10    0.003
1012A                   6:20    0.003
1012A                   6:30    0.003
1012A                   6:40    0.003
1012A                   6:50    0.003
1012A                   7:00    0.003
1012A                   7:10    0.002
1012A                   7:20    0.002
1012A                   7:30    0.002
1012A                   7:40    0.002
1012A                   7:50    0.002
1012A                   8:00    0.002
1012A                   8:10    0.002
1012A                   8:20    0.002
1012A                   8:30    0.002
1012A                   8:40    0.002
1012A                   8:50    0.002
1012A                   9:00    0.002
1012A                   9:10    0.002
1012A                   9:20    0.002
1012A                   9:30    0.002
1012A                   9:40    0.002
1012A                   9:50    0.002
1012A                   10:00   0.002
1012A                   10:10   0.002
1012A                   10:20   0.002
1012A                   10:30   0.002
1012A                   10:40   0.002
1012A                   10:50   0.002
1012A                   11:00   0.002
1012A                   11:10   0.002
1012A                   11:20   0.001
1012A                   11:30   0.001
1012A                   11:40   0.001
1012A                   11:50   0.001
1012A                   12:00   0.001
```

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1012A	12:10	0.001
1012A	12:20	0.001
1012A	12:30	0.001
1012A	12:40	0.001
1012A	12:50	0.001
1012A	13:00	0.001
1012A	13:10	0.001
1012B	0:00	0
1012B	0:10	0
1012B	0:20	0
1012B	0:30	0
1012B	0:40	0.001
1012B	0:50	0.005
1012B	1:00	0.014
1012B	1:10	0.02
1012B	1:20	0.02
1012B	1:30	0.018
1012B	1:40	0.015
1012B	1:50	0.013
1012B	2:00	0.012
1012B	2:10	0.01
1012B	2:20	0.009
1012B	2:30	0.008
1012B	2:40	0.008
1012B	2:50	0.007
1012B	3:00	0.007
1012B	3:10	0.006
1012B	3:20	0.006
1012B	3:30	0.005
1012B	3:40	0.005
1012B	3:50	0.005
1012B	4:00	0.005
1012B	4:10	0.004
1012B	4:20	0.004
1012B	4:30	0.004
1012B	4:40	0.004
1012B	4:50	0.004
1012B	5:00	0.004
1012B	5:10	0.004
1012B	5:20	0.003
1012B	5:30	0.003
1012B	5:40	0.003
1012B	5:50	0.003
1012B	6:00	0.003
1012B	6:10	0.003
1012B	6:20	0.003
1012B	6:30	0.003
1012B	6:40	0.003
1012B	6:50	0.003
1012B	7:00	0.003
1012B	7:10	0.003
1012B	7:20	0.002
1012B	7:30	0.002
1012B	7:40	0.002
1012B	7:50	0.002
1012B	8:00	0.002
1012B	8:10	0.002
1012B	8:20	0.002
1012B	8:30	0.002
1012B	8:40	0.002
1012B	8:50	0.002
1012B	9:00	0.002
1012B	9:10	0.002
1012B	9:20	0.002
1012B	9:30	0.002
1012B	9:40	0.002
1012B	9:50	0.002
1012B	10:00	0.002
1012B	10:10	0.002
1012B	10:20	0.002
1012B	10:30	0.002
1012B	10:40	0.002
1012B	10:50	0.002
1012B	11:00	0.002
1012B	11:10	0.002
1012B	11:20	0.002
1012B	11:30	0.002
1012B	11:40	0.002
1012B	11:50	0.002
1012B	12:00	0.001
1012B	12:10	0.001
1012B	12:20	0.001
1012B	12:30	0.001
1012B	12:40	0.001
1012B	12:50	0.001
1012B	13:00	0.001
1012B	13:10	0.001
;Design inflow to MH1013 from Oct 2007 Ph1 Subdivision design		
1013	0:00	0
1013	0:10	0
1013	0:20	0.001
1013	0:30	0.028
1013	0:40	0.098
1013	0:50	0.315
1013	1:00	0.913
1013	1:10	1.085
1013	1:20	1.05
1013	1:30	0.959
1013	1:40	0.773
1013	1:50	0.563
1013	2:00	0.42
1013	2:10	0.319
1013	2:20	0.252
1013	2:30	0.208
1013	2:40	0.178
1013	2:50	0.157
1013	3:00	0.146
1013	3:10	0.136
1013	3:20	0.114
1013	3:30	0.089
1013	3:40	0.069
1013	3:50	0.054
1013	4:00	0.043
1013	4:10	0.035
1013	4:20	0.03
1013	4:30	0.025
1013	4:40	0.022
1013	4:50	0.019
1013	5:00	0.017
1013	5:10	0.015
1013	5:20	0.013
1013	5:30	0.012
1013	5:40	0.011
1013	5:50	0.011
1013	6:00	0.01
1013	6:10	0.01
1013	6:20	0.009
1013	6:30	0.009
1013	6:40	0.008
1013	6:50	0.008
1013	7:00	0.008
1013	7:10	0.008
1013	7:20	0.007
1013	7:30	0.007
1013	7:40	0.007
1013	7:50	0.007
1013	8:00	0.006
1013	8:10	0.006
1013	8:20	0.006
1013	8:30	0.006
1013	8:40	0.006
1013	8:50	0.006
1013	9:00	0.006
1013	9:10	0.005
1013	9:20	0.005
1013	9:30	0.005
1013	9:40	0.005
1013	9:50	0.005
1013	10:00	0.005
1013	10:10	0.005
1013	10:20	0.005
1013	10:30	0.005
1013	10:40	0.004
1013	10:50	0.004
1013	11:00	0.004
1013	11:10	0.004
1013	11:20	0.004
1013	11:30	0.004
1013	11:40	0.004
1013	11:50	0.004
1013	12:00	0.004
1013	12:10	0.004
1013	12:20	0.004
1013	12:30	0.004
1013	12:40	0.004
1013	12:50	0.004
1013	13:00	0.004
1013	13:10	0.003
1014	0:00	0
1014	0:10	0
1014	0:20	0
1014	0:30	0.002
1014	0:40	0.005
1014	0:50	0.022
1014	1:00	0.022
1014	1:10	0.022
1014	1:20	0.022
1014	1:30	0.022
1014	1:40	0.022
1014	1:50	0.021
1014	2:00	0.02
1014	2:10	0.017
1014	2:20	0.015
1014	2:30	0.013
1014	2:40	0.012
1014	2:50	0.01
1014	3:00	0.009
1014	3:10	0.008
1014	3:20	0.007
1014	3:30	0.006
1014	3:40	0.005
1014	3:50	0.005
1014	4:00	0.004
1014	4:10	0.003
1014	4:20	0.003
1014	4:30	0.003
1014	4:40	0.002
1014	4:50	0.002
1014	5:00	0.002
1014	5:10	0.002
1014	5:20	0.001
1014	5:30	0.001
1014	5:40	0.001
1014	5:50	0.001
1014	6:00	0.001
1014	6:10	0.001
1014	6:20	0.001
1014	6:30	0.001
1014	6:40	0.001
1014	6:50	0.001
1014	7:00	0.001
1014	7:10	0.001
1014	7:20	0.001
1014	7:30	0
1014	7:40	0

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1014	7:50	0
1014	8:00	0
1014	8:10	0
1014	8:20	0
1014	8:30	0
1014	8:40	0
1014	8:50	0
1014	9:00	0
1014	9:10	0
1014	9:20	0
1014	9:30	0
1014	9:40	0
1014	9:50	0
1014	10:00	0
1014	10:10	0
1014	10:20	0
1014	10:30	0
1014	10:40	0
1014	10:50	0
1014	11:00	0
1014	11:10	0
1014	11:20	0
1014	11:30	0
1014	11:40	0
1014	11:50	0
1014	12:00	0
1014	12:10	0
1014	12:20	0
1014	12:30	0
1014	12:40	0
1014	12:50	0
1014	13:00	0
1014	13:10	0
1015	0:00	0
1015	0:10	0
1015	0:20	0.001
1015	0:30	0.004
1015	0:40	0.011
1015	0:50	0.044
1015	1:00	0.044
1015	1:10	0.044
1015	1:20	0.044
1015	1:30	0.041
1015	1:40	0.036
1015	1:50	0.031
1015	2:00	0.027
1015	2:10	0.022
1015	2:20	0.018
1015	2:30	0.015
1015	2:40	0.013
1015	2:50	0.011
1015	3:00	0.01
1015	3:10	0.008
1015	3:20	0.007
1015	3:30	0.006
1015	3:40	0.005
1015	3:50	0.004
1015	4:00	0.004
1015	4:10	0.003
1015	4:20	0.003
1015	4:30	0.002
1015	4:40	0.002
1015	4:50	0.002
1015	5:00	0.002
1015	5:10	0.001
1015	5:20	0.001
1015	5:30	0.001
1015	5:40	0.001
1015	5:50	0.001
1015	6:00	0.001
1015	6:10	0.001
1015	6:20	0.001
1015	6:30	0.001
1015	6:40	0.001
1015	6:50	0.001
1015	7:00	0.001
1015	7:10	0.001
1015	7:20	0.001
1015	7:30	0.001
1015	7:40	0.001
1015	7:50	0.001
1015	8:00	0.001
1015	8:10	0.001
1015	8:20	0.001
1015	8:30	0.001
1015	8:40	0
1015	8:50	0
1015	9:00	0
1015	9:10	0
1015	9:20	0
1015	9:30	0
1015	9:40	0
1015	9:50	0
1015	10:00	0
1015	10:10	0
1015	10:20	0
1015	10:30	0
1015	10:40	0
1015	10:50	0
1015	11:00	0
1015	11:10	0
1015	11:20	0
1015	11:30	0
1015	11:40	0
1015	11:50	0
1015	12:00	0
1015	12:10	0
1015	12:20	0
1015	12:30	0
1015	12:40	0
1015	12:50	0
1015	13:00	0
1015	13:10	0
1016	0:00	0
1016	0:10	0
1016	0:20	0.001
1016	0:30	0.006
1016	0:40	0.008
1016	0:50	0.022
1016	1:00	0.044
1016	1:10	0.044
1016	1:20	0.044
1016	1:30	0.044
1016	1:40	0.032
1016	1:50	0.021
1016	2:00	0.012
1016	2:10	0.01
1016	2:20	0.007
1016	2:30	0.007
1016	2:40	0.006
1016	2:50	0.006
1016	3:00	0.006
1016	3:10	0.005
1016	3:20	0.004
1016	3:30	0.003
1016	3:40	0.003
1016	3:50	0.002
1016	4:00	0.002
1016	4:10	0.002
1016	4:20	0.001
1016	4:30	0.001
1016	4:40	0.001
1016	4:50	0.001
1016	5:00	0.001
1016	5:10	0.001
1016	5:20	0.001
1016	5:30	0.001
1016	5:40	0.001
1016	5:50	0.001
1016	6:00	0.001
1016	6:10	0.001
1016	6:20	0.001
1016	6:30	0.001
1016	6:40	0
1016	6:50	0
1016	7:00	0
1016	7:10	0
1016	7:20	0
1016	7:30	0
1016	7:40	0
1016	7:50	0
1016	8:00	0
1016	8:10	0
1016	8:20	0
1016	8:30	0
1016	8:40	0
1016	8:50	0
1016	9:00	0
1016	9:10	0
1016	9:20	0
1016	9:30	0
1016	9:40	0
1016	9:50	0
1016	10:00	0
1016	10:10	0
1016	10:20	0
1016	10:30	0
1016	10:40	0
1016	10:50	0
1016	11:00	0
1016	11:10	0
1016	11:20	0
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1016	11:40	0
1016	11:50	0
1016	12:00	0
1016	12:10	0
1016	12:20	0
1016	12:30	0
1016	12:40	0
1016	12:50	0
1016	13:00	0
1016	13:10	0
1017	0:00	0
1017	0:10	0
1017	0:20	0.001
1017	0:30	0.003
1017	0:40	0.008
1017	0:50	0.022
1017	1:00	0.022
1017	1:10	0.021
1017	1:20	0.02
1017	1:30	0.016
1017	1:40	0.012
1017	1:50	0.009
1017	2:00	0.007
1017	2:10	0.006
1017	2:20	0.005
1017	2:30	0.004
1017	2:40	0.004
1017	2:50	0.003
1017	3:00	0.003
1017	3:10	0.003
1017	3:20	0.002
1017	3:30	0.002

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1017	3:40	0.001
1017	3:50	0.001
1017	4:00	0.001
1017	4:10	0.001
1017	4:20	0.001
1017	4:30	0.001
1017	4:40	0.001
1017	4:50	0
1017	5:00	0
1017	5:10	0
1017	5:20	0
1017	5:30	0
1017	5:40	0
1017	5:50	0
1017	6:00	0
1017	6:10	0
1017	6:20	0
1017	6:30	0
1017	6:40	0
1017	6:50	0
1017	7:00	0
1017	7:10	0
1017	7:20	0
1017	7:30	0
1017	7:40	0
1017	7:50	0
1017	8:00	0
1017	8:10	0
1017	8:20	0
1017	8:30	0
1017	8:40	0
1017	8:50	0
1017	9:00	0
1017	9:10	0
1017	9:20	0
1017	9:30	0
1017	9:40	0
1017	9:50	0
1017	10:00	0
1017	10:10	0
1017	10:20	0
1017	10:30	0
1017	10:40	0
1017	10:50	0
1017	11:00	0
1017	11:10	0
1017	11:20	0
1017	11:30	0
1017	11:40	0
1017	11:50	0
1017	12:00	0
1017	12:10	0
1017	12:20	0
1017	12:30	0
1017	12:40	0
1017	12:50	0
1017	13:00	0
1017	13:10	0
1018	0:00	0
1018	0:10	0
1018	0:20	0.001
1018	0:30	0.007
1018	0:40	0.012
1018	0:50	0.022
1018	1:00	0.044
1018	1:10	0.044
1018	1:20	0.039
1018	1:30	0.032
1018	1:40	0.02
1018	1:50	0.017
1018	2:00	0.011
1018	2:10	0.009
1018	2:20	0.007
1018	2:30	0.007
1018	2:40	0.006
1018	2:50	0.005
1018	3:00	0.005
1018	3:10	0.004
1018	3:20	0.003
1018	3:30	0.003
1018	3:40	0.002
1018	3:50	0.002
1018	4:00	0.002
1018	4:10	0.001
1018	4:20	0.001
1018	4:30	0.001
1018	4:40	0.001
1018	4:50	0.001
1018	5:00	0.001
1018	5:10	0.001
1018	5:20	0.001
1018	5:30	0.001
1018	5:40	0.001
1018	5:50	0.001
1018	6:00	0.001
1018	6:10	0
1018	6:20	0
1018	6:30	0
1018	6:40	0
1018	6:50	0
1018	7:00	0
1018	7:10	0
1018	7:20	0
1018	7:30	0
1018	7:40	0
1018	7:50	0
1018	8:00	0
1018	8:10	0
1018	8:20	0
1018	8:30	0
1018	8:40	0
1018	8:50	0
1018	9:00	0
1018	9:10	0
1018	9:20	0
1018	9:30	0
1018	9:40	0
1018	9:50	0
1018	10:00	0
1018	10:10	0
1018	10:20	0
1018	10:30	0
1018	10:40	0
1018	10:50	0
1018	11:00	0
1018	11:10	0
1018	11:20	0
1018	11:30	0
1018	11:40	0
1018	11:50	0
1018	12:00	0
1018	12:10	0
1018	12:20	0
1018	12:30	0
1018	12:40	0
1018	12:50	0
1018	13:00	0
1018	13:10	0
1020	0:00	0
1020	0:10	0
1020	0:20	0.002
1020	0:30	0.008
1020	0:40	0.019
1020	0:50	0.022
1020	1:00	0.022
1020	1:10	0.022
1020	1:20	0.022
1020	1:30	0.018
1020	1:40	0.012
1020	1:50	0.01
1020	2:00	0.008
1020	2:10	0.007
1020	2:20	0.006
1020	2:30	0.006
1020	2:40	0.005
1020	2:50	0.005
1020	3:00	0.004
1020	3:10	0.004
1020	3:20	0.003
1020	3:30	0.002
1020	3:40	0.002
1020	3:50	0.002
1020	4:00	0.001
1020	4:10	0.001
1020	4:20	0.001
1020	4:30	0.001
1020	4:40	0.001
1020	4:50	0.001
1020	5:00	0.001
1020	5:10	0.001
1020	5:20	0.001
1020	5:30	0.001
1020	5:40	0.001
1020	5:50	0.001
1020	6:00	0.001
1020	6:10	0.001
1020	6:20	0.001
1020	6:30	0
1020	6:40	0
1020	6:50	0
1020	7:00	0
1020	7:10	0
1020	7:20	0
1020	7:30	0
1020	7:40	0
1020	7:50	0
1020	8:00	0
1020	8:10	0
1020	8:20	0
1020	8:30	0
1020	8:40	0
1020	8:50	0
1020	9:00	0
1020	9:10	0
1020	9:20	0
1020	9:30	0
1020	9:40	0
1020	9:50	0
1020	10:00	0
1020	10:10	0
1020	10:20	0
1020	10:30	0
1020	10:40	0
1020	10:50	0
1020	11:00	0
1020	11:10	0
1020	11:20	0
1020	11:30	0
1020	11:40	0
1020	11:50	0
1020	12:00	0
1020	12:10	0
1020	12:20	0
1020	12:30	0
1020	12:40	0
1020	12:50	0

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1020	13:00	0
1020	13:10	0
1022	0:00	0
1022	0:10	0
1022	0:20	0.003
1022	0:30	0.012
1022	0:40	0.026
1022	0:50	0.054
1022	1:00	0.066
1022	1:10	0.066
1022	1:20	0.066
1022	1:30	0.046
1022	1:40	0.022
1022	1:50	0.018
1022	2:00	0.014
1022	2:10	0.011
1022	2:20	0.01
1022	2:30	0.009
1022	2:40	0.008
1022	2:50	0.007
1022	3:00	0.007
1022	3:10	0.005
1022	3:20	0.004
1022	3:30	0.003
1022	3:40	0.003
1022	3:50	0.002
1022	4:00	0.002
1022	4:10	0.002
1022	4:20	0.002
1022	4:30	0.001
1022	4:40	0.001
1022	4:50	0.001
1022	5:00	0.001
1022	5:10	0.001
1022	5:20	0.001
1022	5:30	0.001
1022	5:40	0.001
1022	5:50	0.001
1022	6:00	0.001
1022	6:10	0.001
1022	6:20	0.001
1022	6:30	0.001
1022	6:40	0.001
1022	6:50	0.001
1022	7:00	0.001
1022	7:10	0.001
1022	7:20	0.001
1022	7:30	0.001
1022	7:40	0.001
1022	7:50	0.001
1022	8:00	0
1022	8:10	0
1022	8:20	0
1022	8:30	0
1022	8:40	0
1022	8:50	0
1022	9:00	0
1022	9:10	0
1022	9:20	0
1022	9:30	0
1022	9:40	0
1022	9:50	0
1022	10:00	0
1022	10:10	0
1022	10:20	0
1022	10:30	0
1022	10:40	0
1022	10:50	0
1022	11:00	0
1022	11:10	0
1022	11:20	0
1022	11:30	0
1022	11:40	0
1022	11:50	0
1022	12:00	0
1022	12:10	0
1022	12:20	0
1022	12:30	0
1022	12:40	0
1022	12:50	0
1022	13:00	0
1022	13:10	0
1023	0:00	0
1023	0:10	0
1023	0:20	0.002
1023	0:30	0.009
1023	0:40	0.021
1023	0:50	0.099
1023	1:00	0.116
1023	1:10	0.113
1023	1:20	0.102
1023	1:30	0.085
1023	1:40	0.052
1023	1:50	0.037
1023	2:00	0.026
1023	2:10	0.02
1023	2:20	0.016
1023	2:30	0.013
1023	2:40	0.011
1023	2:50	0.01
1023	3:00	0.009
1023	3:10	0.007
1023	3:20	0.006
1023	3:30	0.005
1023	3:40	0.004
1023	3:50	0.003
1023	4:00	0.003
1023	4:10	0.002
1023	4:20	0.002
1023	4:30	0.002
1023	4:40	0.002
1023	4:50	0.001
1023	5:00	0.001
1023	5:10	0.001
1023	5:20	0.001
1023	5:30	0.001
1023	5:40	0.001
1023	5:50	0.001
1023	6:00	0.001
1023	6:10	0.001
1023	6:20	0.001
1023	6:30	0.001
1023	6:40	0.001
1023	6:50	0.001
1023	7:00	0.001
1023	7:10	0.001
1023	7:20	0.001
1023	7:30	0.001
1023	7:40	0.001
1023	7:50	0.001
1023	8:00	0.001
1023	8:10	0
1023	8:20	0
1023	8:30	0
1023	8:40	0
1023	8:50	0
1023	9:00	0
1023	9:10	0
1023	9:20	0
1023	9:30	0
1023	9:40	0
1023	9:50	0
1023	10:00	0
1023	10:10	0
1023	10:20	0
1023	10:30	0
1023	10:40	0
1023	10:50	0
1023	11:00	0
1023	11:10	0
1023	11:20	0
1023	11:30	0
1023	11:40	0
1023	11:50	0
1023	12:00	0
1023	12:10	0
1023	12:20	0
1023	12:30	0
1023	12:40	0
1023	12:50	0
1023	13:00	0
1023	13:10	0
1025	0:00	0
1025	0:10	0
1025	0:20	0.001
1025	0:30	0.003
1025	0:40	0.008
1025	0:50	0.022
1025	1:00	0.022
1025	1:10	0.022
1025	1:20	0.022
1025	1:30	0.019
1025	1:40	0.011
1025	1:50	0.005
1025	2:00	0.004
1025	2:10	0.004
1025	2:20	0.003
1025	2:30	0.003
1025	2:40	0.003
1025	2:50	0.002
1025	3:00	0.002
1025	3:10	0.002
1025	3:20	0.001
1025	3:30	0.001
1025	3:40	0.001
1025	3:50	0.001
1025	4:00	0.001
1025	4:10	0.001
1025	4:20	0.001
1025	4:30	0.001
1025	4:40	0.001
1025	4:50	0.001
1025	5:00	0
1025	5:10	0
1025	5:20	0
1025	5:30	0
1025	5:40	0
1025	5:50	0
1025	6:00	0
1025	6:10	0
1025	6:20	0
1025	6:30	0
1025	6:40	0
1025	6:50	0
1025	7:00	0
1025	7:10	0
1025	7:20	0
1025	7:30	0
1025	7:40	0
1025	7:50	0
1025	8:00	0
1025	8:10	0
1025	8:20	0
1025	8:30	0
1025	8:40	0

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1025	8:50	0
1025	9:00	0
1025	9:10	0
1025	9:20	0
1025	9:30	0
1025	9:40	0
1025	9:50	0
1025	10:00	0
1025	10:10	0
1025	10:20	0
1025	10:30	0
1025	10:40	0
1025	10:50	0
1025	11:00	0
1025	11:10	0
1025	11:20	0
1025	11:30	0
1025	11:40	0
1025	11:50	0
1025	12:00	0
1025	12:10	0
1025	12:20	0
1025	12:30	0
1025	12:40	0
1025	12:50	0
1025	13:00	0
1025	13:10	0
1026	0:00	0
1026	0:10	0
1026	0:20	0.001
1026	0:30	0.005
1026	0:40	0.012
1026	0:50	0.022
1026	1:00	0.022
1026	1:10	0.021
1026	1:20	0.017
1026	1:30	0.012
1026	1:40	0.008
1026	1:50	0.006
1026	2:00	0.005
1026	2:10	0.004
1026	2:20	0.004
1026	2:30	0.003
1026	2:40	0.003
1026	2:50	0.003
1026	3:00	0.003
1026	3:10	0.002
1026	3:20	0.001
1026	3:30	0.001
1026	3:40	0.001
1026	3:50	0.001
1026	4:00	0.001
1026	4:10	0.001
1026	4:20	0.001
1026	4:30	0.001
1026	4:40	0
1026	4:50	0
1026	5:00	0
1026	5:10	0
1026	5:20	0
1026	5:30	0
1026	5:40	0
1026	5:50	0
1026	6:00	0
1026	6:10	0
1026	6:20	0
1026	6:30	0
1026	6:40	0
1026	6:50	0
1026	7:00	0
1026	7:10	0
1026	7:20	0
1026	7:30	0
1026	7:40	0
1026	7:50	0
1026	8:00	0
1026	8:10	0
1026	8:20	0
1026	8:30	0
1026	8:40	0
1026	8:50	0
1026	9:00	0
1026	9:10	0
1026	9:20	0
1026	9:30	0
1026	9:40	0
1026	9:50	0
1026	10:00	0
1026	10:10	0
1026	10:20	0
1026	10:30	0
1026	10:40	0
1026	10:50	0
1026	11:00	0
1026	11:10	0
1026	11:20	0
1026	11:30	0
1026	11:40	0
1026	11:50	0
1026	12:00	0
1026	12:10	0
1026	12:20	0
1026	12:30	0
1026	12:40	0
1026	12:50	0
1026	13:00	0
1026	13:10	0

1027	0:00	0
1027	0:10	0
1027	0:20	0.004
1027	0:30	0.014
1027	0:40	0.031
1027	0:50	0.1
1027	1:00	0.11
1027	1:10	0.104
1027	1:20	0.088
1027	1:30	0.051
1027	1:40	0.026
1027	1:50	0.019
1027	2:00	0.013
1027	2:10	0.011
1027	2:20	0.01
1027	2:30	0.009
1027	2:40	0.008
1027	2:50	0.007
1027	3:00	0.006
1027	3:10	0.005
1027	3:20	0.004
1027	3:30	0.003
1027	3:40	0.002
1027	3:50	0.002
1027	4:00	0.002
1027	4:10	0.002
1027	4:20	0.001
1027	4:30	0.001
1027	4:40	0.001
1027	4:50	0.001
1027	5:00	0.001
1027	5:10	0.001
1027	5:20	0.001
1027	5:30	0.001
1027	5:40	0.001
1027	5:50	0.001
1027	6:00	0.001
1027	6:10	0.001
1027	6:20	0.001
1027	6:30	0.001
1027	6:40	0.001
1027	6:50	0.001
1027	7:00	0.001
1027	7:10	0.001
1027	7:20	0
1027	7:30	0
1027	7:40	0
1027	7:50	0
1027	8:00	0
1027	8:10	0
1027	8:20	0
1027	8:30	0
1027	8:40	0
1027	8:50	0
1027	9:00	0
1027	9:10	0
1027	9:20	0
1027	9:30	0
1027	9:40	0
1027	9:50	0
1027	10:00	0
1027	10:10	0
1027	10:20	0
1027	10:30	0
1027	10:40	0
1027	10:50	0
1027	11:00	0
1027	11:10	0
1027	11:20	0
1027	11:30	0
1027	11:40	0
1027	11:50	0
1027	12:00	0
1027	12:10	0
1027	12:20	0
1027	12:30	0
1027	12:40	0
1027	12:50	0
1027	13:00	0
1027	13:10	0
1028	0:00	0
1028	0:10	0
1028	0:20	0.001
1028	0:30	0.004
1028	0:40	0.008
1028	0:50	0.044
1028	1:00	0.044
1028	1:10	0.044
1028	1:20	0.044
1028	1:30	0.036
1028	1:40	0.02
1028	1:50	0.01
1028	2:00	0.006
1028	2:10	0.005
1028	2:20	0.004
1028	2:30	0.004
1028	2:40	0.003
1028	2:50	0.003
1028	3:00	0.003
1028	3:10	0.002
1028	3:20	0.002
1028	3:30	0.001
1028	3:40	0.001
1028	3:50	0.001
1028	4:00	0.001
1028	4:10	0.001
1028	4:20	0.001
1028	4:30	0.001

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1028	4:40	0.001
1028	4:50	0.001
1028	5:00	0.001
1028	5:10	0
1028	5:20	0
1028	5:30	0
1028	5:40	0
1028	5:50	0
1028	6:00	0
1028	6:10	0
1028	6:20	0
1028	6:30	0
1028	6:40	0
1028	6:50	0
1028	7:00	0
1028	7:10	0
1028	7:20	0
1028	7:30	0
1028	7:40	0
1028	7:50	0
1028	8:00	0
1028	8:10	0
1028	8:20	0
1028	8:30	0
1028	8:40	0
1028	8:50	0
1028	9:00	0
1028	9:10	0
1028	9:20	0
1028	9:30	0
1028	9:40	0
1028	9:50	0
1028	10:00	0
1028	10:10	0
1028	10:20	0
1028	10:30	0
1028	10:40	0
1028	10:50	0
1028	11:00	0
1028	11:10	0
1028	11:20	0
1028	11:30	0
1028	11:40	0
1028	11:50	0
1028	12:00	0
1028	12:10	0
1028	12:20	0
1028	12:30	0
1028	12:40	0
1028	12:50	0
1028	13:00	0
1028	13:10	0
1030	0:00	0
1030	0:10	0
1030	0:20	0
1030	0:30	0.002
1030	0:40	0.006
1030	0:50	0.022
1030	1:00	0.022
1030	1:10	0.022
1030	1:20	0.021
1030	1:30	0.018
1030	1:40	0.015
1030	1:50	0.012
1030	2:00	0.01
1030	2:10	0.008
1030	2:20	0.007
1030	2:30	0.006
1030	2:40	0.005
1030	2:50	0.004
1030	3:00	0.004
1030	3:10	0.003
1030	3:20	0.003
1030	3:30	0.002
1030	3:40	0.002
1030	3:50	0.002
1030	4:00	0.001
1030	4:10	0.001
1030	4:20	0.001
1030	4:30	0.001
1030	4:40	0.001
1030	4:50	0.001
1030	5:00	0.001
1030	5:10	0.001
1030	5:20	0.001
1030	5:30	0.001
1030	5:40	0
1030	5:50	0
1030	6:00	0
1030	6:10	0
1030	6:20	0
1030	6:30	0
1030	6:40	0
1030	6:50	0
1030	7:00	0
1030	7:10	0
1030	7:20	0
1030	7:30	0
1030	7:40	0
1030	7:50	0
1030	8:00	0
1030	8:10	0
1030	8:20	0
1030	8:30	0
1030	8:40	0
1030	8:50	0
1030	9:00	0
1030	9:10	0

1030	9:20	0
1030	9:30	0
1030	9:40	0
1030	9:50	0
1030	10:00	0
1030	10:10	0
1030	10:20	0
1030	10:30	0
1030	10:40	0
1030	10:50	0
1030	11:00	0
1030	11:10	0
1030	11:20	0
1030	11:30	0
1030	11:40	0
1030	11:50	0
1030	12:00	0
1030	12:10	0
1030	12:20	0
1030	12:30	0
1030	12:40	0
1030	12:50	0
1030	13:00	0
1030	13:10	0
1031	0:00	0
1031	0:10	0
1031	0:20	0.002
1031	0:30	0.01
1031	0:40	0.02
1031	0:50	0.055
1031	1:00	0.066
1031	1:10	0.066
1031	1:20	0.066
1031	1:30	0.055
1031	1:40	0.035
1031	1:50	0.029
1031	2:00	0.022
1031	2:10	0.019
1031	2:20	0.016
1031	2:30	0.014
1031	2:40	0.013
1031	2:50	0.012
1031	3:00	0.01
1031	3:10	0.008
1031	3:20	0.007
1031	3:30	0.005
1031	3:40	0.004
1031	3:50	0.003
1031	4:00	0.003
1031	4:10	0.002
1031	4:20	0.002
1031	4:30	0.002
1031	4:40	0.001
1031	4:50	0.001
1031	5:00	0.001
1031	5:10	0.001
1031	5:20	0.001
1031	5:30	0.001
1031	5:40	0.001
1031	5:50	0.001
1031	6:00	0.001
1031	6:10	0.001
1031	6:20	0.001
1031	6:30	0.001
1031	6:40	0.001
1031	6:50	0.001
1031	7:00	0
1031	7:10	0
1031	7:20	0
1031	7:30	0
1031	7:40	0
1031	7:50	0
1031	8:00	0
1031	8:10	0
1031	8:20	0
1031	8:30	0
1031	8:40	0
1031	8:50	0
1031	9:00	0
1031	9:10	0
1031	9:20	0
1031	9:30	0
1031	9:40	0
1031	9:50	0
1031	10:00	0
1031	10:10	0
1031	10:20	0
1031	10:30	0
1031	10:40	0
1031	10:50	0
1031	11:00	0
1031	11:10	0
1031	11:20	0
1031	11:30	0
1031	11:40	0
1031	11:50	0
1031	12:00	0
1031	12:10	0
1031	12:20	0
1031	12:30	0
1031	12:40	0
1031	12:50	0
1031	13:00	0
1031	13:10	0
1034	0:00	0
1034	0:10	0
1034	0:20	0.001

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1034	0:30	0.004
1034	0:40	0.011
1034	0:50	0.054
1034	1:00	0.066
1034	1:10	0.065
1034	1:20	0.056
1034	1:30	0.044
1034	1:40	0.033
1034	1:50	0.028
1034	2:00	0.023
1034	2:10	0.019
1034	2:20	0.016
1034	2:30	0.014
1034	2:40	0.013
1034	2:50	0.011
1034	3:00	0.01
1034	3:10	0.009
1034	3:20	0.008
1034	3:30	0.006
1034	3:40	0.005
1034	3:50	0.005
1034	4:00	0.004
1034	4:10	0.003
1034	4:20	0.003
1034	4:30	0.003
1034	4:40	0.002
1034	4:50	0.002
1034	5:00	0.002
1034	5:10	0.002
1034	5:20	0.002
1034	5:30	0.001
1034	5:40	0.001
1034	5:50	0.001
1034	6:00	0.001
1034	6:10	0.001
1034	6:20	0.001
1034	6:30	0.001
1034	6:40	0.001
1034	6:50	0.001
1034	7:00	0.001
1034	7:10	0.001
1034	7:20	0.001
1034	7:30	0.001
1034	7:40	0.001
1034	7:50	0.001
1034	8:00	0.001
1034	8:10	0.001
1034	8:20	0.001
1034	8:30	0.001
1034	8:40	0
1034	8:50	0
1034	9:00	0
1034	9:10	0
1034	9:20	0
1034	9:30	0
1034	9:40	0
1034	9:50	0
1034	10:00	0
1034	10:10	0
1034	10:20	0
1034	10:30	0
1034	10:40	0
1034	10:50	0
1034	11:00	0
1034	11:10	0
1034	11:20	0
1034	11:30	0
1034	11:40	0
1034	11:50	0
1034	12:00	0
1034	12:10	0
1034	12:20	0
1034	12:30	0
1034	12:40	0
1034	12:50	0
1034	13:00	0
1034	13:10	0
1035	0:00	0
1035	0:10	0
1035	0:20	0
1035	0:30	0.002
1035	0:40	0.004
1035	0:50	0.022
1035	1:00	0.044
1035	1:10	0.039
1035	1:20	0.028
1035	1:30	0.024
1035	1:40	0.019
1035	1:50	0.016
1035	2:00	0.013
1035	2:10	0.012
1035	2:20	0.01
1035	2:30	0.009
1035	2:40	0.007
1035	2:50	0.007
1035	3:00	0.006
1035	3:10	0.005
1035	3:20	0.004
1035	3:30	0.004
1035	3:40	0.003
1035	3:50	0.003
1035	4:00	0.003
1035	4:10	0.002
1035	4:20	0.002
1035	4:30	0.002
1035	4:40	0.002
1035	4:50	0.001
1035	5:00	0.001
1035	5:10	0.001
1035	5:20	0.001
1035	5:30	0.001
1035	5:40	0.001
1035	5:50	0.001
1035	6:00	0.001
1035	6:10	0.001
1035	6:20	0.001
1035	6:30	0.001
1035	6:40	0.001
1035	6:50	0.001
1035	7:00	0.001
1035	7:10	0
1035	7:20	0
1035	7:30	0
1035	7:40	0
1035	7:50	0
1035	8:00	0
1035	8:10	0
1035	8:20	0
1035	8:30	0
1035	8:40	0
1035	8:50	0
1035	9:00	0
1035	9:10	0
1035	9:20	0
1035	9:30	0
1035	9:40	0
1035	9:50	0
1035	10:00	0
1035	10:10	0
1035	10:20	0
1035	10:30	0
1035	10:40	0
1035	10:50	0
1035	11:00	0
1035	11:10	0
1035	11:20	0
1035	11:30	0
1035	11:40	0
1035	11:50	0
1035	12:00	0
1035	12:10	0
1035	12:20	0
1035	12:30	0
1035	12:40	0
1035	12:50	0
1035	13:00	0
1035	13:10	0
1036	0:00	0
1036	0:10	0
1036	0:20	0.001
1036	0:30	0.006
1036	0:40	0.013
1036	0:50	0.044
1036	1:00	0.044
1036	1:10	0.044
1036	1:20	0.044
1036	1:30	0.032
1036	1:40	0.017
1036	1:50	0.012
1036	2:00	0.008
1036	2:10	0.007
1036	2:20	0.006
1036	2:30	0.005
1036	2:40	0.005
1036	2:50	0.004
1036	3:00	0.004
1036	3:10	0.003
1036	3:20	0.002
1036	3:30	0.002
1036	3:40	0.001
1036	3:50	0.001
1036	4:00	0.001
1036	4:10	0.001
1036	4:20	0.001
1036	4:30	0.001
1036	4:40	0.001
1036	4:50	0.001
1036	5:00	0.001
1036	5:10	0.001
1036	5:20	0
1036	5:30	0
1036	5:40	0
1036	5:50	0
1036	6:00	0
1036	6:10	0
1036	6:20	0
1036	6:30	0
1036	6:40	0
1036	6:50	0
1036	7:00	0
1036	7:10	0
1036	7:20	0
1036	7:30	0
1036	7:40	0
1036	7:50	0
1036	8:00	0
1036	8:10	0
1036	8:20	0
1036	8:30	0
1036	8:40	0
1036	8:50	0
1036	9:00	0
1036	9:10	0
1036	9:20	0
1036	9:30	0
1036	9:40	0

Design Storm: 100 Year 3-hour Chicago Storm

1036	9:50	0
1036	10:00	0
1036	10:10	0
1036	10:20	0
1036	10:30	0
1036	10:40	0
1036	10:50	0
1036	11:00	0
1036	11:10	0
1036	11:20	0
1036	11:30	0
1036	11:40	0
1036	11:50	0
1036	12:00	0
1036	12:10	0
1036	12:20	0
1036	12:30	0
1036	12:40	0
1036	12:50	0
1036	13:00	0
1036	13:10	0
1038	0:00	0
1038	0:10	0
1038	0:20	0.001
1038	0:30	0.005
1038	0:40	0.013
1038	0:50	0.044
1038	1:00	0.044
1038	1:10	0.033
1038	1:20	0.027
1038	1:30	0.024
1038	1:40	0.018
1038	1:50	0.015
1038	2:00	0.012
1038	2:10	0.01
1038	2:20	0.008
1038	2:30	0.007
1038	2:40	0.006
1038	2:50	0.006
1038	3:00	0.005
1038	3:10	0.005
1038	3:20	0.004
1038	3:30	0.003
1038	3:40	0.003
1038	3:50	0.002
1038	4:00	0.002
1038	4:10	0.002
1038	4:20	0.002
1038	4:30	0.001
1038	4:40	0.001
1038	4:50	0.001
1038	5:00	0.001
1038	5:10	0.001
1038	5:20	0.001
1038	5:30	0.001
1038	5:40	0.001
1038	5:50	0.001
1038	6:00	0.001
1038	6:10	0.001
1038	6:20	0.001
1038	6:30	0.001
1038	6:40	0.001
1038	6:50	0.001
1038	7:00	0.001
1038	7:10	0.001
1038	7:20	0.001
1038	7:30	0.001
1038	7:40	0.001
1038	7:50	0
1038	8:00	0
1038	8:10	0
1038	8:20	0
1038	8:30	0
1038	8:40	0
1038	8:50	0
1038	9:00	0
1038	9:10	0
1038	9:20	0
1038	9:30	0
1038	9:40	0
1038	9:50	0
1038	10:00	0
1038	10:10	0
1038	10:20	0
1038	10:30	0
1038	10:40	0
1038	10:50	0
1038	11:00	0
1038	11:10	0
1038	11:20	0
1038	11:30	0
1038	11:40	0
1038	11:50	0
1038	12:00	0
1038	12:10	0
1038	12:20	0
1038	12:30	0
1038	12:40	0
1038	12:50	0
1038	13:00	0
1038	13:10	0
1039	0:00	0
1039	0:10	0
1039	0:20	0
1039	0:30	0.002
1039	0:40	0.006
1039	0:50	0.022
1039	1:00	0.022
1039	1:10	0.022
1039	1:20	0.022
1039	1:30	0.019
1039	1:40	0.014
1039	1:50	0.01
1039	2:00	0.008
1039	2:10	0.006
1039	2:20	0.005
1039	2:30	0.004
1039	2:40	0.004
1039	2:50	0.003
1039	3:00	0.003
1039	3:10	0.003
1039	3:20	0.002
1039	3:30	0.002
1039	3:40	0.002
1039	3:50	0.001
1039	4:00	0.001
1039	4:10	0.001
1039	4:20	0.001
1039	4:30	0.001
1039	4:40	0.001
1039	4:50	0.001
1039	5:00	0.001
1039	5:10	0.001
1039	5:20	0.001
1039	5:30	0.001
1039	5:40	0
1039	5:50	0
1039	6:00	0
1039	6:10	0
1039	6:20	0
1039	6:30	0
1039	6:40	0
1039	6:50	0
1039	7:00	0
1039	7:10	0
1039	7:20	0
1039	7:30	0
1039	7:40	0
1039	7:50	0
1039	8:00	0
1039	8:10	0
1039	8:20	0
1039	8:30	0
1039	8:40	0
1039	8:50	0
1039	9:00	0
1039	9:10	0
1039	9:20	0
1039	9:30	0
1039	9:40	0
1039	9:50	0
1039	10:00	0
1039	10:10	0
1039	10:20	0
1039	10:30	0
1039	10:40	0
1039	10:50	0
1039	11:00	0
1039	11:10	0
1039	11:20	0
1039	11:30	0
1039	11:40	0
1039	11:50	0
1039	12:00	0
1039	12:10	0
1039	12:20	0
1039	12:30	0
1039	12:40	0
1039	12:50	0
1039	13:00	0
1039	13:10	0

;Design inflow to MH1043 from Oct 2007 Ph1 Subdivision design

1043	0:00	0
1043	0:10	0
1043	0:20	0.001
1043	0:30	0.004
1043	0:40	0.01
1043	0:50	0.052
1043	1:00	0.066
1043	1:10	0.062
1043	1:20	0.031
1043	1:30	0.015
1043	1:40	0.009
1043	1:50	0.007
1043	2:00	0.005
1043	2:10	0.005
1043	2:20	0.004
1043	2:30	0.004
1043	2:40	0.003
1043	2:50	0.003
1043	3:00	0.003
1043	3:10	0.002
1043	3:20	0.002
1043	3:30	0.001
1043	3:40	0.001
1043	3:50	0.001
1043	4:00	0.001
1043	4:10	0.001
1043	4:20	0.001
1043	4:30	0.001
1043	4:40	0.001
1043	4:50	0.001
1043	5:00	0.001
1043	5:10	0.001
1043	5:20	0.001

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1043	5:30	0.001
1043	5:40	0.001
1043	5:50	0
1043	6:00	0
1043	6:10	0
1043	6:20	0
1043	6:30	0
1043	6:40	0
1043	6:50	0
1043	7:00	0
1043	7:10	0
1043	7:20	0
1043	7:30	0
1043	7:40	0
1043	7:50	0
1043	8:00	0
1043	8:10	0
1043	8:20	0
1043	8:30	0
1043	8:40	0
1043	8:50	0
1043	9:00	0
1043	9:10	0
1043	9:20	0
1043	9:30	0
1043	9:40	0
1043	9:50	0
1043	10:00	0
1043	10:10	0
1043	10:20	0
1043	10:30	0
1043	10:40	0
1043	10:50	0
1043	11:00	0
1043	11:10	0
1043	11:20	0
1043	11:30	0
1043	11:40	0
1043	11:50	0
1043	12:00	0
1043	12:10	0
1043	12:20	0
1043	12:30	0
1043	12:40	0
1043	12:50	0
1043	13:00	0
1043	13:10	0
1043D	0:00	0
1043D	0:10	0
1043D	0:20	0
1043D	0:30	0
1043D	0:40	0.001
1043D	0:50	0.009
1043D	1:00	0.019
1043D	1:10	0.016
1043D	1:20	0.011
1043D	1:30	0.009
1043D	1:40	0.008
1043D	1:50	0.007
1043D	2:00	0.006
1043D	2:10	0.005
1043D	2:20	0.005
1043D	2:30	0.004
1043D	2:40	0.004
1043D	2:50	0.004
1043D	3:00	0.003
1043D	3:10	0.003
1043D	3:20	0.003
1043D	3:30	0.003
1043D	3:40	0.003
1043D	3:50	0.002
1043D	4:00	0.002
1043D	4:10	0.002
1043D	4:20	0.002
1043D	4:30	0.002
1043D	4:40	0.002
1043D	4:50	0.002
1043D	5:00	0.002
1043D	5:10	0.002
1043D	5:20	0.002
1043D	5:30	0.002
1043D	5:40	0.002
1043D	5:50	0.002
1043D	6:00	0.002
1043D	6:10	0.001
1043D	6:20	0.001
1043D	6:30	0.001
1043D	6:40	0.001
1043D	6:50	0.001
1043D	7:00	0.001
1043D	7:10	0.001
1043D	7:20	0.001
1043D	7:30	0.001
1043D	7:40	0.001
1043D	7:50	0.001
1043D	8:00	0.001
1043D	8:10	0.001
1043D	8:20	0.001
1043D	8:30	0.001
1043D	8:40	0.001
1043D	8:50	0.001
1043D	9:00	0.001
1043D	9:10	0.001
1043D	9:20	0.001
1043D	9:30	0.001
1043D	9:40	0.001
1043D	9:50	0.001
1043D	10:00	0.001

1043D	10:10	0.001
1043D	10:20	0.001
1043D	10:30	0.001
1043D	10:40	0.001
1043D	10:50	0.001
1043D	11:00	0.001
1043D	11:10	0.001
1043D	11:20	0.001
1043D	11:30	0.001
1043D	11:40	0.001
1043D	11:50	0.001
1043D	12:00	0.001
1043D	12:10	0.001
1043D	12:20	0.001
1043D	12:30	0.001
1043D	12:40	0.001
1043D	12:50	0.001
1043D	13:00	0.001
1043D	13:10	0.001
1043E	0:00	0
1043E	0:10	0
1043E	0:20	0
1043E	0:30	0
1043E	0:40	0
1043E	0:50	0.003
1043E	1:00	0.01
1043E	1:10	0.014
1043E	1:20	0.015
1043E	1:30	0.013
1043E	1:40	0.011
1043E	1:50	0.01
1043E	2:00	0.009
1043E	2:10	0.008
1043E	2:20	0.007
1043E	2:30	0.006
1043E	2:40	0.005
1043E	2:50	0.005
1043E	3:00	0.005
1043E	3:10	0.004
1043E	3:20	0.004
1043E	3:30	0.004
1043E	3:40	0.004
1043E	3:50	0.003
1043E	4:00	0.003
1043E	4:10	0.003
1043E	4:20	0.003
1043E	4:30	0.003
1043E	4:40	0.003
1043E	4:50	0.003
1043E	5:00	0.002
1043E	5:10	0.002
1043E	5:20	0.002
1043E	5:30	0.002
1043E	5:40	0.002
1043E	5:50	0.002
1043E	6:00	0.002
1043E	6:10	0.002
1043E	6:20	0.002
1043E	6:30	0.002
1043E	6:40	0.002
1043E	6:50	0.002
1043E	7:00	0.002
1043E	7:10	0.002
1043E	7:20	0.002
1043E	7:30	0.002
1043E	7:40	0.002
1043E	7:50	0.002
1043E	8:00	0.001
1043E	8:10	0.001
1043E	8:20	0.001
1043E	8:30	0.001
1043E	8:40	0.001
1043E	8:50	0.001
1043E	9:00	0.001
1043E	9:10	0.001
1043E	9:20	0.001
1043E	9:30	0.001
1043E	9:40	0.001
1043E	9:50	0.001
1043E	10:00	0.001
1043E	10:10	0.001
1043E	10:20	0.001
1043E	10:30	0.001
1043E	10:40	0.001
1043E	10:50	0.001
1043E	11:00	0.001
1043E	11:10	0.001
1043E	11:20	0.001
1043E	11:30	0.001
1043E	11:40	0.001
1043E	11:50	0.001
1043E	12:00	0.001
1043E	12:10	0.001
1043E	12:20	0.001
1043E	12:30	0.001
1043E	12:40	0.001
1043E	12:50	0.001
1043E	13:00	0.001
1043E	13:10	0.001
1043F	0:00	0
1043F	0:10	0
1043F	0:20	0
1043F	0:30	0
1043F	0:40	0
1043F	0:50	0.002
1043F	1:00	0.007
1043F	1:10	0.012

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1043F	1:20	0.014
1043F	1:30	0.015
1043F	1:40	0.015
1043F	1:50	0.015
1043F	2:00	0.015
1043F	2:10	0.014
1043F	2:20	0.013
1043F	2:30	0.012
1043F	2:40	0.011
1043F	2:50	0.011
1043F	3:00	0.01
1043F	3:10	0.009
1043F	3:20	0.009
1043F	3:30	0.008
1043F	3:40	0.008
1043F	3:50	0.007
1043F	4:00	0.007
1043F	4:10	0.006
1043F	4:20	0.006
1043F	4:30	0.006
1043F	4:40	0.005
1043F	4:50	0.005
1043F	5:00	0.005
1043F	5:10	0.005
1043F	5:20	0.004
1043F	5:30	0.004
1043F	5:40	0.004
1043F	5:50	0.004
1043F	6:00	0.004
1043F	6:10	0.004
1043F	6:20	0.004
1043F	6:30	0.003
1043F	6:40	0.003
1043F	6:50	0.003
1043F	7:00	0.003
1043F	7:10	0.003
1043F	7:20	0.003
1043F	7:30	0.003
1043F	7:40	0.003
1043F	7:50	0.003
1043F	8:00	0.003
1043F	8:10	0.003
1043F	8:20	0.003
1043F	8:30	0.002
1043F	8:40	0.002
1043F	8:50	0.002
1043F	9:00	0.002
1043F	9:10	0.002
1043F	9:20	0.002
1043F	9:30	0.002
1043F	9:40	0.002
1043F	9:50	0.002
1043F	10:00	0.002
1043F	10:10	0.002
1043F	10:20	0.002
1043F	10:30	0.002
1043F	10:40	0.002
1043F	10:50	0.002
1043F	11:00	0.002
1043F	11:10	0.002
1043F	11:20	0.002
1043F	11:30	0.002
1043F	11:40	0.002
1043F	11:50	0.002
1043F	12:00	0.002
1043F	12:10	0.002
1043F	12:20	0.002
1043F	12:30	0.002
1043F	12:40	0.002
1043F	12:50	0.002
1043F	13:00	0.002
1043F	13:10	0.001
1043G	0:00	0
1043G	0:10	0
1043G	0:20	0
1043G	0:30	0
1043G	0:40	0
1043G	0:50	0.004
1043G	1:00	0.009
1043G	1:10	0.012
1043G	1:20	0.01
1043G	1:30	0.008
1043G	1:40	0.007
1043G	1:50	0.006
1043G	2:00	0.005
1043G	2:10	0.004
1043G	2:20	0.004
1043G	2:30	0.003
1043G	2:40	0.003
1043G	2:50	0.003
1043G	3:00	0.003
1043G	3:10	0.002
1043G	3:20	0.002
1043G	3:30	0.002
1043G	3:40	0.002
1043G	3:50	0.002
1043G	4:00	0.002
1043G	4:10	0.002
1043G	4:20	0.002
1043G	4:30	0.002
1043G	4:40	0.001
1043G	4:50	0.001
1043G	5:00	0.001
1043G	5:10	0.001
1043G	5:20	0.001
1043G	5:30	0.001
1043G	5:40	0.001
1043G	5:50	0.001
1043G	6:00	0.001
1043G	6:10	0.001
1043G	6:20	0.001
1043G	6:30	0.001
1043G	6:40	0.001
1043G	6:50	0.001
1043G	7:00	0.001
1043G	7:10	0.001
1043G	7:20	0.001
1043G	7:30	0.001
1043G	7:40	0.001
1043G	7:50	0.001
1043G	8:00	0.001
1043G	8:10	0.001
1043G	8:20	0.001
1043G	8:30	0.001
1043G	8:40	0.001
1043G	8:50	0.001
1043G	9:00	0.001
1043G	9:10	0.001
1043G	9:20	0.001
1043G	9:30	0.001
1043G	9:40	0.001
1043G	9:50	0.001
1043G	10:00	0.001
1043G	10:10	0.001
1043G	10:20	0.001
1043G	10:30	0.001
1043G	10:40	0.001
1043G	10:50	0.001
1043G	11:00	0.001
1043G	11:10	0.001
1043G	11:20	0.001
1043G	11:30	0.001
1043G	11:40	0.001
1043G	11:50	0.001
1043G	12:00	0.001
1043G	12:10	0.001
1043G	12:20	0.001
1043G	12:30	0.001
1043G	12:40	0.001
1043G	12:50	0.001
1043G	13:00	0.001
1043G	13:10	0
1044	0:00	0
1044	0:10	0
1044	0:20	0.001
1044	0:30	0.004
1044	0:40	0.011
1044	0:50	0.022
1044	1:00	0.022
1044	1:10	0.022
1044	1:20	0.019
1044	1:30	0.014
1044	1:40	0.009
1044	1:50	0.007
1044	2:00	0.006
1044	2:10	0.005
1044	2:20	0.004
1044	2:30	0.004
1044	2:40	0.004
1044	2:50	0.003
1044	3:00	0.003
1044	3:10	0.003
1044	3:20	0.002
1044	3:30	0.002
1044	3:40	0.001
1044	3:50	0.001
1044	4:00	0.001
1044	4:10	0.001
1044	4:20	0.001
1044	4:30	0.001
1044	4:40	0.001
1044	4:50	0.001
1044	5:00	0.001
1044	5:10	0.001
1044	5:20	0.001
1044	5:30	0
1044	5:40	0
1044	5:50	0
1044	6:00	0
1044	6:10	0
1044	6:20	0
1044	6:30	0
1044	6:40	0
1044	6:50	0
1044	7:00	0
1044	7:10	0
1044	7:20	0
1044	7:30	0
1044	7:40	0
1044	7:50	0
1044	8:00	0
1044	8:10	0
1044	8:20	0
1044	8:30	0
1044	8:40	0
1044	8:50	0
1044	9:00	0
1044	9:10	0
1044	9:20	0
1044	9:30	0
1044	9:40	0
1044	9:50	0
1044	10:00	0
1044	10:10	0
1044	10:20	0
1044	10:30	0

1044	10:40	0
1044	10:50	0
1044	11:00	0
1044	11:10	0
1044	11:20	0
1044	11:30	0
1044	11:40	0
1044	11:50	0
1044	12:00	0
1044	12:10	0
1044	12:20	0
1044	12:30	0
1044	12:40	0
1044	12:50	0
1044	13:00	0
1044	13:10	0
1045	0:00	0
1045	0:10	0
1045	0:20	0.001
1045	0:30	0.006
1045	0:40	0.011
1045	0:50	0.044
1045	1:00	0.044
1045	1:10	0.044
1045	1:20	0.044
1045	1:30	0.041
1045	1:40	0.028
1045	1:50	0.022
1045	2:00	0.016
1045	2:10	0.013
1045	2:20	0.011
1045	2:30	0.009
1045	2:40	0.008
1045	2:50	0.007
1045	3:00	0.007
1045	3:10	0.005
1045	3:20	0.005
1045	3:30	0.004
1045	3:40	0.003
1045	3:50	0.003
1045	4:00	0.002
1045	4:10	0.002
1045	4:20	0.002
1045	4:30	0.002
1045	4:40	0.001
1045	4:50	0.001
1045	5:00	0.001
1045	5:10	0.001
1045	5:20	0.001
1045	5:30	0.001
1045	5:40	0.001
1045	5:50	0.001
1045	6:00	0.001
1045	6:10	0.001
1045	6:20	0.001
1045	6:30	0.001
1045	6:40	0.001
1045	6:50	0.001
1045	7:00	0.001
1045	7:10	0.001
1045	7:20	0.001
1045	7:30	0
1045	7:40	0
1045	7:50	0
1045	8:00	0
1045	8:10	0
1045	8:20	0
1045	8:30	0
1045	8:40	0
1045	8:50	0
1045	9:00	0
1045	9:10	0
1045	9:20	0
1045	9:30	0
1045	9:40	0
1045	9:50	0
1045	10:00	0
1045	10:10	0
1045	10:20	0
1045	10:30	0
1045	10:40	0
1045	10:50	0
1045	11:00	0
1045	11:10	0
1045	11:20	0
1045	11:30	0
1045	11:40	0
1045	11:50	0
1045	12:00	0
1045	12:10	0
1045	12:20	0
1045	12:30	0
1045	12:40	0
1045	12:50	0
1045	13:00	0
1045	13:10	0
1046	0:00	0
1046	0:10	0
1046	0:20	0
1046	0:30	0.002
1046	0:40	0.008
1046	0:50	0.022
1046	1:00	0.022
1046	1:10	0.022
1046	1:20	0.018
1046	1:30	0.012
1046	1:40	0.009
1046	1:50	0.006
1046	2:00	0.005
1046	2:10	0.004
1046	2:20	0.004
1046	2:30	0.003
1046	2:40	0.003
1046	2:50	0.003
1046	3:00	0.003
1046	3:10	0.003
1046	3:20	0.002
1046	3:30	0.002
1046	3:40	0.002
1046	3:50	0.001
1046	4:00	0.001
1046	4:10	0.001
1046	4:20	0.001
1046	4:30	0.001
1046	4:40	0.001
1046	4:50	0.001
1046	5:00	0.001
1046	5:10	0.001
1046	5:20	0.001
1046	5:30	0.001
1046	5:40	0.001
1046	5:50	0.001
1046	6:00	0.001
1046	6:10	0.001
1046	6:20	0.001
1046	6:30	0.001
1046	6:40	0
1046	6:50	0
1046	7:00	0
1046	7:10	0
1046	7:20	0
1046	7:30	0
1046	7:40	0
1046	7:50	0
1046	8:00	0
1046	8:10	0
1046	8:20	0
1046	8:30	0
1046	8:40	0
1046	8:50	0
1046	9:00	0
1046	9:10	0
1046	9:20	0
1046	9:30	0
1046	9:40	0
1046	9:50	0
1046	10:00	0
1046	10:10	0
1046	10:20	0
1046	10:30	0
1046	10:40	0
1046	10:50	0
1046	11:00	0
1046	11:10	0
1046	11:20	0
1046	11:30	0
1046	11:40	0
1046	11:50	0
1046	12:00	0
1046	12:10	0
1046	12:20	0
1046	12:30	0
1046	12:40	0
1046	12:50	0
1046	13:00	0
1046	13:10	0
;Design inflow to MH1047 from Oct 2007 Ph1 Subdivision design		
1047	0:00	0
1047	0:10	0
1047	0:20	0.001
1047	0:30	0.003
1047	0:40	0.008
1047	0:50	0.022
1047	1:00	0.022
1047	1:10	0.022
1047	1:20	0.011
1047	1:30	0.006
1047	1:40	0.005
1047	1:50	0.004
1047	2:00	0.004
1047	2:10	0.002
1047	2:20	0.003
1047	2:30	0.002
1047	2:40	0.002
1047	2:50	0.002
1047	3:00	0.002
1047	3:10	0.002
1047	3:20	0.002
1047	3:30	0.001
1047	3:40	0.001
1047	3:50	0.001
1047	4:00	0.001
1047	4:10	0.001
1047	4:20	0.001
1047	4:30	0.001
1047	4:40	0.001
1047	4:50	0.001
1047	5:00	0.001
1047	5:10	0.001
1047	5:20	0.001
1047	5:30	0
1047	5:40	0
1047	5:50	0
1047	6:00	0
1047	6:10	0

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1047	6:20	0
1047	6:30	0
1047	6:40	0
1047	6:50	0
1047	7:00	0
1047	7:10	0
1047	7:20	0
1047	7:30	0
1047	7:40	0
1047	7:50	0
1047	8:00	0
1047	8:10	0
1047	8:20	0
1047	8:30	0
1047	8:40	0
1047	8:50	0
1047	9:00	0
1047	9:10	0
1047	9:20	0
1047	9:30	0
1047	9:40	0
1047	9:50	0
1047	10:00	0
1047	10:10	0
1047	10:20	0
1047	10:30	0
1047	10:40	0
1047	10:50	0
1047	11:00	0
1047	11:10	0
1047	11:20	0
1047	11:30	0
1047	11:40	0
1047	11:50	0
1047	12:00	0
1047	12:10	0
1047	12:20	0
1047	12:30	0
1047	12:40	0
1047	12:50	0
1047	13:00	0
1047	13:10	0

;Design inflow to MH1048A from Oct 2007 Ph1 Subdivision design		
1048A	0:00	0
1048A	0:10	0
1048A	0:20	0.001
1048A	0:30	0.007
1048A	0:40	0.01
1048A	0:50	0.044
1048A	1:00	0.044
1048A	1:10	0.044
1048A	1:20	0.044
1048A	1:30	0.044
1048A	1:40	0.044
1048A	1:50	0.034
1048A	2:00	0.012
1048A	2:10	0.006
1048A	2:20	0.008
1048A	2:30	0.005
1048A	2:40	0.006
1048A	2:50	0.005
1048A	3:00	0.005
1048A	3:10	0.004
1048A	3:20	0.003
1048A	3:30	0.002
1048A	3:40	0.002
1048A	3:50	0.001
1048A	4:00	0.001
1048A	4:10	0.001
1048A	4:20	0.001
1048A	4:30	0.001
1048A	4:40	0.001
1048A	4:50	0.001
1048A	5:00	0.001
1048A	5:10	0.001
1048A	5:20	0.001
1048A	5:30	0.001
1048A	5:40	0.001
1048A	5:50	0.001
1048A	6:00	0.001
1048A	6:10	0.001
1048A	6:20	0
1048A	6:30	0
1048A	6:40	0
1048A	6:50	0
1048A	7:00	0
1048A	7:10	0
1048A	7:20	0
1048A	7:30	0
1048A	7:40	0
1048A	7:50	0
1048A	8:00	0
1048A	8:10	0
1048A	8:20	0
1048A	8:30	0
1048A	8:40	0
1048A	8:50	0
1048A	9:00	0
1048A	9:10	0
1048A	9:20	0
1048A	9:30	0
1048A	9:40	0
1048A	9:50	0
1048A	10:00	0
1048A	10:10	0
1048A	10:20	0
1048A	10:30	0
1048A	10:40	0
1048A	10:50	0
1048A	11:00	0
1048A	11:10	0
1048A	11:20	0
1048A	11:30	0
1048A	11:40	0
1048A	11:50	0
1048A	12:00	0
1048A	12:10	0
1048A	12:20	0
1048A	12:30	0
1048A	12:40	0
1048A	12:50	0
1048A	13:00	0
1048A	13:10	0

;Design inflow to MH1051 from Oct 2007 Ph1 Subdivision design		
1051	0:00	0
1051	0:10	0
1051	0:20	0
1051	0:30	0.002
1051	0:40	0.002
1051	0:50	0
1051	1:00	0.022
1051	1:10	0.022
1051	1:20	0.022
1051	1:30	0.016
1051	1:40	0.007
1051	1:50	0.006
1051	2:00	0.003
1051	2:10	0.003
1051	2:20	0.002
1051	2:30	0.002
1051	2:40	0.002
1051	2:50	0.002
1051	3:00	0.002
1051	3:10	0.001
1051	3:20	0.001
1051	3:30	0.001
1051	3:40	0.001
1051	3:50	0
1051	4:00	0
1051	4:10	0
1051	4:20	0
1051	4:30	0
1051	4:40	0
1051	4:50	0
1051	5:00	0
1051	5:10	0
1051	5:20	0
1051	5:30	0
1051	5:40	0
1051	5:50	0
1051	6:00	0
1051	6:10	0
1051	6:20	0
1051	6:30	0
1051	6:40	0
1051	6:50	0
1051	7:00	0
1051	7:10	0
1051	7:20	0
1051	7:30	0
1051	7:40	0
1051	7:50	0
1051	8:00	0
1051	8:10	0
1051	8:20	0
1051	8:30	0
1051	8:40	0
1051	8:50	0
1051	9:00	0
1051	9:10	0
1051	9:20	0
1051	9:30	0
1051	9:40	0
1051	9:50	0
1051	10:00	0
1051	10:10	0
1051	10:20	0
1051	10:30	0
1051	10:40	0
1051	10:50	0
1051	11:00	0
1051	11:10	0
1051	11:20	0
1051	11:30	0
1051	11:40	0
1051	11:50	0
1051	12:00	0
1051	12:10	0
1051	12:20	0
1051	12:30	0
1051	12:40	0
1051	12:50	0
1051	13:00	0
1051	13:10	0

1052A	0:00	0
1052A	0:10	0
1052A	0:20	0
1052A	0:30	0
1052A	0:40	0.001
1052A	0:50	0.006
1052A	1:00	0.018
1052A	1:10	0.026
1052A	1:20	0.027
1052A	1:30	0.026
1052A	1:40	0.024

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

1052A	1:50	0.021
1052A	2:00	0.019
1052A	2:10	0.017
1052A	2:20	0.015
1052A	2:30	0.013
1052A	2:40	0.012
1052A	2:50	0.011
1052A	3:00	0.009
1052A	3:10	0.009
1052A	3:20	0.008
1052A	3:30	0.007
1052A	3:40	0.007
1052A	3:50	0.006
1052A	4:00	0.006
1052A	4:10	0.005
1052A	4:20	0.005
1052A	4:30	0.005
1052A	4:40	0.005
1052A	4:50	0.004
1052A	5:00	0.004
1052A	5:10	0.004
1052A	5:20	0.004
1052A	5:30	0.004
1052A	5:40	0.003
1052A	5:50	0.003
1052A	6:00	0.003
1052A	6:10	0.003
1052A	6:20	0.003
1052A	6:30	0.003
1052A	6:40	0.003
1052A	6:50	0.003
1052A	7:00	0.003
1052A	7:10	0.003
1052A	7:20	0.003
1052A	7:30	0.002
1052A	7:40	0.002
1052A	7:50	0.002
1052A	8:00	0.002
1052A	8:10	0.002
1052A	8:20	0.002
1052A	8:30	0.002
1052A	8:40	0.002
1052A	8:50	0.002
1052A	9:00	0.002
1052A	9:10	0.002
1052A	9:20	0.002
1052A	9:30	0.002
1052A	9:40	0.002
1052A	9:50	0.002
1052A	10:00	0.002
1052A	10:10	0.002
1052A	10:20	0.002
1052A	10:30	0.002
1052A	10:40	0.002
1052A	10:50	0.002
1052A	11:00	0.002
1052A	11:10	0.002
1052A	11:20	0.002
1052A	11:30	0.002
1052A	11:40	0.001
1052A	11:50	0.001
1052A	12:00	0.001
1052A	12:10	0.001
1052A	12:20	0.001
1052A	12:30	0.001
1052A	12:40	0.001
1052A	12:50	0.001
1052A	13:00	0.001
1052A	13:10	0.001
1052B	0:00	0
1052B	0:10	0
1052B	0:20	0
1052B	0:30	0
1052B	0:40	0
1052B	0:50	0.003
1052B	1:00	0.01
1052B	1:10	0.015
1052B	1:20	0.016
1052B	1:30	0.015
1052B	1:40	0.013
1052B	1:50	0.011
1052B	2:00	0.01
1052B	2:10	0.009
1052B	2:20	0.008
1052B	2:30	0.007
1052B	2:40	0.006
1052B	2:50	0.006
1052B	3:00	0.006
1052B	3:10	0.005
1052B	3:20	0.005
1052B	3:30	0.005
1052B	3:40	0.004
1052B	3:50	0.004
1052B	4:00	0.004
1052B	4:10	0.004
1052B	4:20	0.004
1052B	4:30	0.003
1052B	4:40	0.003
1052B	4:50	0.003
1052B	5:00	0.003
1052B	5:10	0.003
1052B	5:20	0.003
1052B	5:30	0.003
1052B	5:40	0.003
1052B	5:50	0.003
1052B	6:00	0.002
1052B	6:10	0.002
1052B	6:20	0.002
1052B	6:30	0.002
1052B	6:40	0.002
1052B	6:50	0.002
1052B	7:00	0.002
1052B	7:10	0.002
1052B	7:20	0.002
1052B	7:30	0.002
1052B	7:40	0.002
1052B	7:50	0.002
1052B	8:00	0.002
1052B	8:10	0.002
1052B	8:20	0.002
1052B	8:30	0.002
1052B	8:40	0.002
1052B	8:50	0.002
1052B	9:00	0.002
1052B	9:10	0.002
1052B	9:20	0.002
1052B	9:30	0.002
1052B	9:40	0.001
1052B	9:50	0.001
1052B	10:00	0.001
1052B	10:10	0.001
1052B	10:20	0.001
1052B	10:30	0.001
1052B	10:40	0.001
1052B	10:50	0.001
1052B	11:00	0.001
1052B	11:10	0.001
1052B	11:20	0.001
1052B	11:30	0.001
1052B	11:40	0.001
1052B	11:50	0.001
1052B	12:00	0.001
1052B	12:10	0.001
1052B	12:20	0.001
1052B	12:30	0.001
1052B	12:40	0.001
1052B	12:50	0.001
1052B	13:00	0.001
1052B	13:10	0.001
1053	0:00	0
1053	0:10	0
1053	0:20	0.002
1053	0:30	0.008
1053	0:40	0.019
1053	0:50	0.082
1053	1:00	0.088
1053	1:10	0.078
1053	1:20	0.047
1053	1:30	0.038
1053	1:40	0.025
1053	1:50	0.02
1053	2:00	0.015
1053	2:10	0.012
1053	2:20	0.01
1053	2:30	0.009
1053	2:40	0.008
1053	2:50	0.007
1053	3:00	0.006
1053	3:10	0.005
1053	3:20	0.004
1053	3:30	0.004
1053	3:40	0.003
1053	3:50	0.003
1053	4:00	0.002
1053	4:10	0.002
1053	4:20	0.002
1053	4:30	0.002
1053	4:40	0.001
1053	4:50	0.001
1053	5:00	0.001
1053	5:10	0.001
1053	5:20	0.001
1053	5:30	0.001
1053	5:40	0.001
1053	5:50	0.001
1053	6:00	0.001
1053	6:10	0.001
1053	6:20	0.001
1053	6:30	0.001
1053	6:40	0.001
1053	6:50	0.001
1053	7:00	0.001
1053	7:10	0.001
1053	7:20	0.001
1053	7:30	0.001
1053	7:40	0.001
1053	7:50	0.001
1053	8:00	0.001
1053	8:10	0.001
1053	8:20	0
1053	8:30	0
1053	8:40	0
1053	8:50	0
1053	9:00	0
1053	9:10	0
1053	9:20	0
1053	9:30	0
1053	9:40	0
1053	9:50	0
1053	10:00	0
1053	10:10	0
1053	10:20	0
1053	10:30	0
1053	10:40	0
1053	10:50	0
1053	11:00	0

Design Storm: 100 Year 3-hour Chicago Storm

1053	11:10	0
1053	11:20	0
1053	11:30	0
1053	11:40	0
1053	11:50	0
1053	12:00	0
1053	12:10	0
1053	12:20	0
1053	12:30	0
1053	12:40	0
1053	12:50	0
1053	13:00	0
1053	13:10	0
;Design inflow to MH2000	from Oct 2007 Ph2 Subdivision design	
2000	0:00	0
2000	0:10	0
2000	0:20	0.001
2000	0:30	0.003
2000	0:40	0.008
2000	0:50	0.022
2000	1:00	0.022
2000	1:10	0.011
2000	1:20	0.008
2000	1:30	0.005
2000	1:40	0.004
2000	1:50	0.003
2000	2:00	0.002
2000	2:10	0.002
2000	2:20	0.002
2000	2:30	0.002
2000	2:40	0.002
2000	2:50	0.001
2000	3:00	0.001
2000	3:10	0.001
2000	3:20	0.001
2000	3:30	0.001
2000	3:40	0.001
2000	3:50	0.001
2000	4:00	0.001
2000	4:10	0
2000	4:20	0
2000	4:30	0
2000	4:40	0
2000	4:50	0
2000	5:00	0
2000	5:10	0
2000	5:20	0
2000	5:30	0
2000	5:40	0
2000	5:50	0
2000	6:00	0
2000	6:10	0
2000	6:20	0
2000	6:30	0
2000	6:40	0
2000	6:50	0
2000	7:00	0
2000A	0:00	0
2000A	0:10	0
2000A	0:20	0
2000A	0:30	0.001
2000A	0:40	0.003
2000A	0:50	0.044
2000A	1:00	0.041
2000A	1:10	0.024
2000A	1:20	0.009
2000A	1:30	0.007
2000A	1:40	0.006
2000A	1:50	0.004
2000A	2:00	0.004
2000A	2:10	0.003
2000A	2:20	0.003
2000A	2:30	0.003
2000A	2:40	0.002
2000A	2:50	0.002
2000A	3:00	0.002
2000A	3:10	0.002
2000A	3:20	0.002
2000A	3:30	0.002
2000A	3:40	0.001
2000A	3:50	0.001
2000A	4:00	0.001
2000A	4:10	0.001
2000A	4:20	0.001
2000A	4:30	0.001
2000A	4:40	0.001
2000A	4:50	0.001
2000A	5:00	0.001
2000A	5:10	0.001
2000A	5:20	0.001
2000A	5:30	0.001
2000A	5:40	0.001
2000A	5:50	0.001
2000A	6:00	0.001
2000A	6:10	0.001
2000A	6:20	0.001
2000A	6:30	0
2000A	6:40	0
2000A	6:50	0
2000A	7:00	0
;Design inflow to MH2001	from Oct 2007 Ph2 Subdivision design	
2001	0:00	0
2001	0:10	0
2001	0:20	0.001
2001	0:30	0.003
2001	0:40	0.009
2001	0:50	0.022
2001	1:00	0.022
2001	1:10	0.016
2001	1:20	0.01
2001	1:30	0.008
2001	1:40	0.005
2001	1:50	0.004
2001	2:00	0.003
2001	2:10	0.003
2001	2:20	0.003
2001	2:30	0.002
2001	2:40	0.002
2001	2:50	0.002
2001	3:00	0.002
2001	3:10	0.001
2001	3:20	0.001
2001	3:30	0.001
2001	3:40	0.001
2001	3:50	0.001
2001	4:00	0.001
2001	4:10	0
2001	4:20	0
2001	4:30	0
2001	4:40	0
2001	4:50	0
2001	5:00	0
2001	5:10	0
2001	5:20	0
2001	5:30	0
2001	5:40	0
2001	5:50	0
2001	6:00	0
2001	6:10	0
2001	6:20	0
2001	6:30	0
2001	6:40	0
2001	6:50	0
2001	7:00	0
;Design inflow to MH2004	from Oct 2007 Ph2 Subdivision design	
2004	0:00	0
2004	0:10	0
2004	0:20	0.002
2004	0:30	0.007
2004	0:40	0.017
2004	0:50	0.044
2004	1:00	0.044
2004	1:10	0.033
2004	1:20	0.019
2004	1:30	0.011
2004	1:40	0.008
2004	1:50	0.007
2004	2:00	0.005
2004	2:10	0.005
2004	2:20	0.004
2004	2:30	0.004
2004	2:40	0.004
2004	2:50	0.003
2004	3:00	0.003
2004	3:10	0.002
2004	3:20	0.002
2004	3:30	0.001
2004	3:40	0.001
2004	3:50	0.001
2004	4:00	0.001
2004	4:10	0.001
2004	4:20	0.001
2004	4:30	0.001
2004	4:40	0.001
2004	4:50	0.001
2004	5:00	0.001
2004	5:10	0.001
2004	5:20	0
2004	5:30	0
2004	5:40	0
2004	5:50	0
2004	6:00	0
2004	6:10	0
2004	6:20	0
2004	6:30	0
2004	6:40	0
2004	6:50	0
2004	7:00	0
August4_1988	0:00	0
August4_1988	0:05	0.1
August4_1988	0:10	0.1
August4_1988	0:15	0
August4_1988	0:20	3.7
August4_1988	0:25	6.2
August4_1988	0:30	101.5
August4_1988	0:35	15.5
August4_1988	0:40	29.3
August4_1988	0:45	19.8
August4_1988	0:50	1.5
August4_1988	0:55	1.7
August4_1988	1:00	5.4
August4_1988	1:05	24.6
August4_1988	1:10	26.5
August4_1988	1:15	34.9
August4_1988	1:20	10.2
August4_1988	1:25	27.1
August4_1988	1:30	104.4
August4_1988	1:35	27.5
August4_1988	1:40	62.5
August4_1988	1:45	31.8
August4_1988	1:50	79.8
August4_1988	1:55	67.5
August4_1988	2:00	156.2

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

August4_1988	2:05	5.1
August4_1988	2:10	0.2
August4_1988	2:15	0.2
August4_1988	2:20	0.2
August4_1988	2:25	0.2
August4_1988	2:30	0.2
August4_1988	2:35	0.2
August4_1988	2:40	0.2
August4_1988	2:45	0.2
August4_1988	2:50	0.2
August4_1988	2:55	0.2
August4_1988	3:00	12.8
August4_1988	3:05	14
August4_1988	3:10	22.2
August4_1988	3:15	21.8
August4_1988	3:20	1.4
August4_1988	3:25	0.2
August4_1988	3:30	0.2
August4_1988	3:35	0.2
August4_1988	3:40	0.2
August4_1988	3:45	0.2
August4_1988	3:50	0.2
August4_1988	3:55	0.2
August4_1988	4:00	0.2
August4_1988	4:05	0.2
August4_1988	4:10	0.2
August4_1988	4:15	0.2
August4_1988	4:20	0.2
August4_1988	4:25	0.2
August4_1988	4:30	0.2
August4_1988	4:35	0.2
August4_1988	4:40	0.2
August4_1988	4:45	0.2
August4_1988	4:50	0.2
August4_1988	4:55	0.2
August4_1988	5:00	2.9
August4_1988	5:05	7.8
August4_1988	5:10	10
August4_1988	5:15	6.3
August4_1988	5:20	5.1
August4_1988	5:25	9.8
August4_1988	5:30	2.6
August4_1988	5:35	1.7
August8_1996	0:00	4
August8_1996	0:05	11.9
August8_1996	0:10	26.5
August8_1996	0:15	13.3
August8_1996	0:20	0
August8_1996	0:25	2.7
August8_1996	0:30	0
August8_1996	0:35	8
August8_1996	0:40	18.6
August8_1996	0:45	10.6
August8_1996	0:50	21.2
August8_1996	0:55	2.7
August8_1996	1:00	2.7
August8_1996	1:05	15.9
August8_1996	1:10	66.3
August8_1996	1:15	55.7
August8_1996	1:20	122
August8_1996	1:25	88.9
August8_1996	1:30	9.63
August8_1996	1:35	8
August8_1996	1:40	4
August8_1996	1:45	0
August8_1996	1:50	2.7
August8_1996	1:55	0
August8_1996	2:00	0
August8_1996	2:05	0
August8_1996	2:10	5.3
August8_1996	2:15	0
August8_1996	2:20	0
August8_1996	2:25	0
August8_1996	2:30	0
August8_1996	2:35	0
August8_1996	2:40	0
August8_1996	2:45	4
August8_1996	2:50	53.1
August8_1996	2:55	69
August8_1996	3:00	63.7
August8_1996	3:05	58.4
August8_1996	3:10	47.8
August8_1996	3:15	15.9
August8_1996	3:20	13.3
August8_1996	3:25	8
August8_1996	3:30	5.3
August8_1996	3:35	6.6
August8_1996	3:40	2.7
August8_1996	3:45	4
August8_1996	3:50	2.7
August8_1996	3:55	4
August8_1996	4:00	2.7
August8_1996	4:05	5.3
August8_1996	4:10	4
August8_1996	4:15	2.7
August8_1996	4:20	4
August8_1996	4:25	2.7
August8_1996	4:30	1.3
August8_1996	4:35	1.3
August8_1996	4:40	0
August8_1996	4:45	0
August8_1996	4:50	0
August8_1996	4:55	0
August8_1996	5:00	2.7
August8_1996	5:05	0
August8_1996	5:10	0
August8_1996	5:15	0
August8_1996	5:20	0
August8_1996	5:25	0
August8_1996	5:30	0
August8_1996	5:35	0
August8_1996	5:40	1.3
Chicago_100yr_3h	0:00	0
Chicago_100yr_3h	0:10	6.05
Chicago_100yr_3h	0:20	7.54
Chicago_100yr_3h	0:30	10.16
Chicago_100yr_3h	0:40	15.97
Chicago_100yr_3h	0:50	40.65
Chicago_100yr_3h	1:00	178.56
Chicago_100yr_3h	1:10	54.05
Chicago_100yr_3h	1:20	27.32
Chicago_100yr_3h	1:30	18.24
Chicago_100yr_3h	1:40	13.74
Chicago_100yr_3h	1:50	11.06
Chicago_100yr_3h	2:00	9.29
Chicago_100yr_3h	2:10	8.02
Chicago_100yr_3h	2:20	7.08
Chicago_100yr_3h	2:30	6.35
Chicago_100yr_3h	2:40	5.76
Chicago_100yr_3h	2:50	5.28
Chicago_100yr_3h	3:00	4.88
Chicago_100yr+20%_3h	0:00	0
Chicago_100yr+20%_3h	0:10	7.26
Chicago_100yr+20%_3h	0:20	9.048
Chicago_100yr+20%_3h	0:30	12.192
Chicago_100yr+20%_3h	0:40	19.164
Chicago_100yr+20%_3h	0:50	48.78
Chicago_100yr+20%_3h	1:00	214.272
Chicago_100yr+20%_3h	1:10	64.86
Chicago_100yr+20%_3h	1:20	32.784
Chicago_100yr+20%_3h	1:30	21.888
Chicago_100yr+20%_3h	1:40	16.488
Chicago_100yr+20%_3h	1:50	13.272
Chicago_100yr+20%_3h	2:00	11.148
Chicago_100yr+20%_3h	2:10	9.624
Chicago_100yr+20%_3h	2:20	8.496
Chicago_100yr+20%_3h	2:30	7.62
Chicago_100yr+20%_3h	2:40	6.912
Chicago_100yr+20%_3h	2:50	6.336
Chicago_100yr+20%_3h	3:00	5.856
Chicago_2yr_3h	0:00	0
Chicago_2yr_3h	0:10	2.81
Chicago_2yr_3h	0:20	3.5
Chicago_2yr_3h	0:30	4.69
Chicago_2yr_3h	0:40	7.3
Chicago_2yr_3h	0:50	18.21
Chicago_2yr_3h	1:00	76.81
Chicago_2yr_3h	1:10	24.08
Chicago_2yr_3h	1:20	12.36
Chicago_2yr_3h	1:30	8.32
Chicago_2yr_3h	1:40	6.3
Chicago_2yr_3h	1:50	5.09
Chicago_2yr_3h	2:00	4.29
Chicago_2yr_3h	2:10	3.72
Chicago_2yr_3h	2:20	3.29
Chicago_2yr_3h	2:30	2.95
Chicago_2yr_3h	2:40	2.68
Chicago_2yr_3h	2:50	2.46
Chicago_2yr_3h	3:00	2.28
Chicago_5yr_3h	0:00	0
Chicago_5yr_3h	0:10	3.68
Chicago_5yr_3h	0:20	4.58
Chicago_5yr_3h	0:30	6.15
Chicago_5yr_3h	0:40	9.61
Chicago_5yr_3h	0:50	24.17
Chicago_5yr_3h	1:00	104.19
Chicago_5yr_3h	1:10	32.04
Chicago_5yr_3h	1:20	16.34
Chicago_5yr_3h	1:30	10.96
Chicago_5yr_3h	1:40	8.29
Chicago_5yr_3h	1:50	6.69
Chicago_5yr_3h	2:00	5.63
Chicago_5yr_3h	2:10	4.87
Chicago_5yr_3h	2:20	4.3
Chicago_5yr_3h	2:30	3.86
Chicago_5yr_3h	2:40	3.51
Chicago_5yr_3h	2:50	3.22
Chicago_5yr_3h	3:00	2.98
July1_1979	0:00	0
July1_1979	0:05	2.3
July1_1979	0:10	2.3
July1_1979	0:15	8.89
July1_1979	0:20	8.89
July1_1979	0:25	8.89
July1_1979	0:30	8.89
July1_1979	0:35	38.1
July1_1979	0:40	38.1
July1_1979	0:45	38.1
July1_1979	0:50	38.1
July1_1979	0:55	38.1
July1_1979	1:00	38.1
July1_1979	1:05	38.1
July1_1979	1:10	50.8
July1_1979	1:15	50.8
July1_1979	1:20	76.2
July1_1979	1:25	106.7
July1_1979	1:30	106.7
July1_1979	1:35	71.1
July1_1979	1:40	71.1
July1_1979	1:45	30.5
July1_1979	1:50	30.5
July1_1979	1:55	30.5

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

```
July1_1979              2:00      30.5
July1_1979              2:05      3.8
July1_1979              2:10      3.8
July1_1979              2:15      3.8
July1_1979              2:20      3.8
July1_1979              2:25      3.8
July1_1979              2:30      3.8
July1_1979              2:35      3.8
July1_1979              2:40      3.8
July1_1979              2:45      3.8
July1_1979              2:50      3.8
July1_1979              2:55      3.8
July1_1979              3:00      3.8

SCS_Type_II_100yr_103.2mm          0:00      1.17
SCS_Type_II_100yr_103.2mm          0:10      1.17
SCS_Type_II_100yr_103.2mm          0:20      1.17
SCS_Type_II_100yr_103.2mm          0:30      1.17
SCS_Type_II_100yr_103.2mm          0:40      1.17
SCS_Type_II_100yr_103.2mm          0:50      1.17
SCS_Type_II_100yr_103.2mm          1:00      1.17
SCS_Type_II_100yr_103.2mm          1:10      1.17
SCS_Type_II_100yr_103.2mm          1:20      1.17
SCS_Type_II_100yr_103.2mm          1:30      1.17
SCS_Type_II_100yr_103.2mm          1:40      1.17
SCS_Type_II_100yr_103.2mm          1:50      1.17
SCS_Type_II_100yr_103.2mm          2:00      1.39
SCS_Type_II_100yr_103.2mm          2:10      1.39
SCS_Type_II_100yr_103.2mm          2:20      1.39
SCS_Type_II_100yr_103.2mm          2:30      1.39
SCS_Type_II_100yr_103.2mm          2:40      1.39
SCS_Type_II_100yr_103.2mm          2:50      1.39
SCS_Type_II_100yr_103.2mm          3:00      1.39
SCS_Type_II_100yr_103.2mm          3:10      1.39
SCS_Type_II_100yr_103.2mm          3:20      1.39
SCS_Type_II_100yr_103.2mm          3:30      1.39
SCS_Type_II_100yr_103.2mm          3:40      1.39
SCS_Type_II_100yr_103.2mm          3:50      1.39
SCS_Type_II_100yr_103.2mm          4:00      1.71
SCS_Type_II_100yr_103.2mm          4:10      1.71
SCS_Type_II_100yr_103.2mm          4:20      1.71
SCS_Type_II_100yr_103.2mm          4:30      1.71
SCS_Type_II_100yr_103.2mm          4:40      1.71
SCS_Type_II_100yr_103.2mm          4:50      1.71
SCS_Type_II_100yr_103.2mm          5:00      1.71
SCS_Type_II_100yr_103.2mm          5:10      1.71
SCS_Type_II_100yr_103.2mm          5:20      1.71
SCS_Type_II_100yr_103.2mm          5:30      1.71
SCS_Type_II_100yr_103.2mm          5:40      1.71
SCS_Type_II_100yr_103.2mm          5:50      1.71
SCS_Type_II_100yr_103.2mm          6:00      1.92
SCS_Type_II_100yr_103.2mm          6:10      1.92
SCS_Type_II_100yr_103.2mm          6:20      1.92
SCS_Type_II_100yr_103.2mm          6:30      1.92
SCS_Type_II_100yr_103.2mm          6:40      1.92
SCS_Type_II_100yr_103.2mm          6:50      1.92
SCS_Type_II_100yr_103.2mm          7:00      2.35
SCS_Type_II_100yr_103.2mm          7:10      2.35
SCS_Type_II_100yr_103.2mm          7:20      2.35
SCS_Type_II_100yr_103.2mm          7:30      2.35
SCS_Type_II_100yr_103.2mm          7:40      2.35
SCS_Type_II_100yr_103.2mm          7:50      2.35
SCS_Type_II_100yr_103.2mm          8:00      2.78
SCS_Type_II_100yr_103.2mm          8:10      2.78
SCS_Type_II_100yr_103.2mm          8:20      2.78
SCS_Type_II_100yr_103.2mm          8:30      2.99
SCS_Type_II_100yr_103.2mm          8:40      2.99
SCS_Type_II_100yr_103.2mm          8:50      2.99
SCS_Type_II_100yr_103.2mm          9:00      3.42
SCS_Type_II_100yr_103.2mm          9:10      3.42
SCS_Type_II_100yr_103.2mm          9:20      3.42
SCS_Type_II_100yr_103.2mm          9:30      3.84
SCS_Type_II_100yr_103.2mm          9:40      3.84
SCS_Type_II_100yr_103.2mm          9:50      3.84
SCS_Type_II_100yr_103.2mm          10:00     4.91
SCS_Type_II_100yr_103.2mm          10:10     4.91
SCS_Type_II_100yr_103.2mm          10:20     4.91
SCS_Type_II_100yr_103.2mm          10:30     6.62
SCS_Type_II_100yr_103.2mm          10:40     6.62
SCS_Type_II_100yr_103.2mm          10:50     6.62
SCS_Type_II_100yr_103.2mm          11:00     10.25
SCS_Type_II_100yr_103.2mm          11:10     10.25
SCS_Type_II_100yr_103.2mm          11:20     10.25
SCS_Type_II_100yr_103.2mm          11:30     31.6
SCS_Type_II_100yr_103.2mm          11:40     81.12
SCS_Type_II_100yr_103.2mm          11:50     130.65
SCS_Type_II_100yr_103.2mm          12:00     15.37
SCS_Type_II_100yr_103.2mm          12:10     15.37
SCS_Type_II_100yr_103.2mm          12:20     15.37
SCS_Type_II_100yr_103.2mm          12:30     7.9
SCS_Type_II_100yr_103.2mm          12:40     7.9
SCS_Type_II_100yr_103.2mm          12:50     7.9
SCS_Type_II_100yr_103.2mm          13:00     5.76
SCS_Type_II_100yr_103.2mm          13:10     5.76
SCS_Type_II_100yr_103.2mm          13:20     5.76
SCS_Type_II_100yr_103.2mm          13:30     4.48
SCS_Type_II_100yr_103.2mm          13:40     4.48
SCS_Type_II_100yr_103.2mm          13:50     4.48
SCS_Type_II_100yr_103.2mm          14:00     3.2
SCS_Type_II_100yr_103.2mm          14:10     3.2
SCS_Type_II_100yr_103.2mm          14:20     3.2
SCS_Type_II_100yr_103.2mm          14:30     3.2
SCS_Type_II_100yr_103.2mm          14:40     3.2
SCS_Type_II_100yr_103.2mm          14:50     3.2
SCS_Type_II_100yr_103.2mm          15:00     3.2
SCS_Type_II_100yr_103.2mm          15:10     3.2
SCS_Type_II_100yr_103.2mm          15:20     3.2
SCS_Type_II_100yr_103.2mm          15:30     3.2
SCS_Type_II_100yr_103.2mm          15:40     3.2
SCS_Type_II_100yr_103.2mm          15:50     3.2
SCS_Type_II_100yr_103.2mm          16:00     1.92
SCS_Type_II_100yr_103.2mm          16:10     1.92
SCS_Type_II_100yr_103.2mm          16:20     1.92
SCS_Type_II_100yr_103.2mm          16:30     1.92
SCS_Type_II_100yr_103.2mm          16:40     1.92
SCS_Type_II_100yr_103.2mm          16:50     1.92
SCS_Type_II_100yr_103.2mm          17:00     1.92
SCS_Type_II_100yr_103.2mm          17:10     1.92
SCS_Type_II_100yr_103.2mm          17:20     1.92
SCS_Type_II_100yr_103.2mm          17:30     1.92
SCS_Type_II_100yr_103.2mm          17:40     1.92
SCS_Type_II_100yr_103.2mm          17:50     1.92
SCS_Type_II_100yr_103.2mm          18:00     1.92
SCS_Type_II_100yr_103.2mm          18:10     1.92
SCS_Type_II_100yr_103.2mm          18:20     1.92
SCS_Type_II_100yr_103.2mm          18:30     1.92
SCS_Type_II_100yr_103.2mm          18:40     1.92
SCS_Type_II_100yr_103.2mm          18:50     1.92
SCS_Type_II_100yr_103.2mm          19:00     1.92
SCS_Type_II_100yr_103.2mm          19:10     1.92
SCS_Type_II_100yr_103.2mm          19:20     1.92
SCS_Type_II_100yr_103.2mm          19:30     1.92
SCS_Type_II_100yr_103.2mm          19:40     1.92
SCS_Type_II_100yr_103.2mm          19:50     1.92
SCS_Type_II_100yr_103.2mm          20:00     1.28
SCS_Type_II_100yr_103.2mm          20:10     1.28
SCS_Type_II_100yr_103.2mm          20:20     1.28
SCS_Type_II_100yr_103.2mm          20:30     1.28
SCS_Type_II_100yr_103.2mm          20:40     1.28
SCS_Type_II_100yr_103.2mm          20:50     1.28
SCS_Type_II_100yr_103.2mm          21:00     1.28
SCS_Type_II_100yr_103.2mm          21:10     1.28
SCS_Type_II_100yr_103.2mm          21:20     1.28
SCS_Type_II_100yr_103.2mm          21:30     1.28
SCS_Type_II_100yr_103.2mm          21:40     1.28
SCS_Type_II_100yr_103.2mm          21:50     1.28
SCS_Type_II_100yr_103.2mm          22:00     1.28
SCS_Type_II_100yr_103.2mm          22:10     1.28
SCS_Type_II_100yr_103.2mm          22:20     1.28
SCS_Type_II_100yr_103.2mm          22:30     1.28
SCS_Type_II_100yr_103.2mm          22:40     1.28
SCS_Type_II_100yr_103.2mm          22:50     1.28
SCS_Type_II_100yr_103.2mm          23:00     1.28
SCS_Type_II_100yr_103.2mm          23:10     1.28
SCS_Type_II_100yr_103.2mm          23:20     1.28
SCS_Type_II_100yr_103.2mm          23:30     1.28
SCS_Type_II_100yr_103.2mm          23:40     1.28
SCS_Type_II_100yr_103.2mm          23:50     1.28

[REPORT]
;;Reporting Options
INPUT      YES
CONTROLS   NO
SUBCATCHMENTS ALL
NODES ALL
LINKS ALL

[TAGS]
Node       2005             MH
Node       Diversion-1053   MH
Node       1001             ExMH
Node       1002             ExMH
Node       1004             ExMH
Node       1005             ExMH
Node       1006             ExMH
Node       1006A            ExMH
Node       1007             ExMH
Node       1008             ExMH
Node       1009             ExMH
Node       1010             ExMH
Node       1011             ExMH
Node       1012             ExMH
Node       1013             ExMH
Node       1014             ExMH
Node       1015             ExMH
Node       1016             ExMH
Node       1017             ExMH
Node       1018             ExMH
Node       1019             ExMH
Node       1020             ExMH
Node       1021             ExMH
Node       1022             ExMH
Node       1023             ExMH
Node       1024             ExMH
Node       1025             ExMH
Node       1026             ExMH
Node       1027             ExMH
Node       1028             ExMH
Node       1029             ExMH
Node       1030             ExMH
Node       1031             ExMH
Node       1033             ExMH
Node       1034             ExMH
Node       1035             ExMH
Node       1036             ExMH
Node       1037             ExMH
Node       1038             ExMH
Node       1039             ExMH
Node       1040             ExMH
Node       1041             ExMH
Node       1042             ExMH
Node       1043             ExMH
Node       1043A            ExMH
Node       1044             ExMH
Node       1045             ExMH
Node       1046             ExMH
Node       1047             ExMH
Node       1048             ExMH
```

Trails West: Cope Drive Units – PCSWMM Input Data – 2007 Subdivision

Design Storm: 100 Year 3-hour Chicago Storm

```
Node       1048A            ExMH
Node       1049             ExMH
Node       1050             ExMH
Node       1051             ExMH
Node       1052             ExMH
Node       1053             ExMH
Node       2000             ExMH
Node       2001             ExMH
Node       2002             ExMH
Node       2003             ExMH
Node       2004             ExMH
Link       C68              ExMinorSystem
Link       L101             ExMinorSystem
Link       L102             ExMinorSystem
Link       L103A            ExMinorSystem
Link       L103B            ExMinorSystem
Link       L104             ExMinorSystem
Link       L105             ExMinorSystem
Link       L106             ExMinorSystem
Link       L107             ExMinorSystem
Link       L108             ExMinorSystem
Link       L109             ExMinorSystem
Link       L110             ExMinorSystem
Link       L111             ExMinorSystem
Link       L112             ExMinorSystem
Link       L113             ExMinorSystem
Link       L114             ExMinorSystem
Link       L115             ExMinorSystem
Link       L116             ExMinorSystem
Link       L117             ExMinorSystem
Link       L118             ExMinorSystem
Link       L119             ExMinorSystem
Link       L120             ExMinorSystem
Link       L121             ExMinorSystem
Link       L122             ExMinorSystem
Link       L123             ExMinorSystem
Link       L124             ExMinorSystem
Link       L125             ExMinorSystem
Link       L126             ExMinorSystem
Link       L127             ExMinorSystem
Link       L128             ExMinorSystem
Link       L129             ExMinorSystem
Link       L130             ExMinorSystem
Link       L131             ExMinorSystem
Link       L133             FutMinor
Link       L134             FutMinor
Link       L135             FutMinor
Link       L136             FutMinor
Link       L138             FutMinor
Link       L139             FutMinor
Link       L140             ExMinorSystem
Link       L141             FutMinor
Link       L142             FutMinor
Link       L31              ExMinorSystem
Link       L32              ExMinorSystem
Link       L33              ExMinorSystem
Link       L34              ExMinorSystem
Link       L46              ExMinorSystem
Link       L47              ExMinorSystem
Link       L48              ExMinorSystem
Link       L49              ExMinorSystem
Link       L50              ExMinorSystem
Link       L56              ExMinorSystem
Link       L57              ExMinorSystem
Link       L59              ExMinorSystem
Link       L60              ExMinorSystem
Link       L83              ExMinorSystem
Link       L84              ExMinorSystem
Link       L85              ExMinorSystem
Link       L86              ExMinorSystem
Link       L87              ExMinorSystem
Link       L88              ExMinorSystem
Link       L89              ExMinorSystem
Link       L90              ExMinorSystem
Link       L91              ExMinorSystem
Link       L92              ExMinorSystem
Link       L93              ExMinorSystem
Link       L94              ExMinorSystem
Link       L95              ExMinorSystem
Link       L96              ExMinorSystem
Link       L97              ExMinorSystem
Link       L98              ExMinorSystem

[MAP]
DIMENSIONS       353854.75295     5015239.9928     354603.17205
5015858.5492
UNITS            Meters

[COORDINATES]
;;Node            X-Coord            Y-Coord
;;--------------- ------------------ ------------------
2005             354529.203         5015695.473
Diversion-1053   354335.15          5015642.12
1001             354385.393         5015297.322
1002             354353.33          5015268.109
1004             354300.967         5015328.509
1005             354259.103         5015376.795
1006             354198.883         5015446.261
1006A            354198.87          5015454.32
1007             354427.973         5015327.365
1008             354403.791         5015350.159
1009             354366.514         5015385.297
1010             354311.938         5015445.19
1011             354258.95          5015506.403
1012             354225.97          5015544.818
1012A            354212.895         5015533.201
1012B            354193.631         5015516.358
1013             354067.827         5015475.072
1014             354122.432         5015526.35
1015             354193.424         5015586.291
1016             354243.699         5015631.745
1017             354436.696         5015334.927
1018             354490.164         5015381.283
1019             354568.148         5015451.67
1020             354569.153         5015459.707
1021             354541.323         5015507.456
1022             354375.649         5015393.277
1023             354439.242         5015448.836
1024             354525.555         5015526.328
1025             354500.742         5015552.182
1026             354321.961         5015453.866
1027             354371.62          5015496.89
1028             354432.46          5015565.2
1029             354445.693         5015586.896
1030             354267.749         5015514.037
1031             354316.816         5015556.579
1033             353889.421         5015807.011
1034             353888.772         5015794.1
1035             353957.659         5015714.641
1036             354001.186         5015753.48
1037             353909.973         5015826.122
1038             353943.526         5015830.433
1039             354021.224         5015793.638
1040             354019.255         5015664.96
1041             354079.209         5015717.772
1042             354098.775         5015757.124
1043             354059.845         5015596.768
1043A            354096.159         5015554.876
1043D            354122.353         5015577.583
1043E            354146.826         5015597.213
1043F            354174.328         5015621.568
1044             354070.364         5015606.007
1045             354146.306         5015672.707
1046             354171.206         5015723.593
1047             354225.919         5015698.925
1048             354280.692         5015674.946
1048A            354306.57          5015698.253
1049             354381.795         5015623.085
1050             354373.383         5015621.938
1051             354359.486         5015606.349
1052             354327.67          5015633.736
1052A            354313.334         5015615.741
1052B            354302.847         5015600.025
1053             354008.751         5015655.704
2000             354437.797         5015789.783
2000A            354426.849         5015775.696
2001             354475.916         5015772.151
2002             354454.87          5015727.526
2003             354457.518         5015717.281
2004             354489.999         5015701.021
CB1043G          354188.724         5015635.914

[VERTICES]
;;Link            X-Coord            Y-Coord
;;--------------- ------------------ ------------------

[SYMBOLS]
;;Gage            X-Coord            Y-Coord
;;--------------- ------------------ ------------------
```

C.3 Storm Sewer Design Sheet

Stantec

Cavanagh Construction - Cope Drive Units

DATE: 2023-04-12
REVISION: 2
DESIGNED BY: WAJ
CHECKED BY: -

STORM SEWER DESIGN SHEET
(City of Ottawa)

FILE NUMBER: 160401718

DESIGN PARAMETERS

$I = a / (t+b)^c$ (As per City of Ottawa Guidelines, 2012)

	1:2 yr	1:5 yr	1:10 yr	1:100 yr			
a =	732.951	998.071	1174.184	1735.688	MANNING'S n =	0.013	BEDDING CLASS = B
b =	6.199	6.053	6.014	6.014	MINIMUM COVER:	2.00	m
c =	0.810	0.814	0.816	0.820	TIME OF ENTRY	10	min

LOCATION			DRAINAGE AREA																						PIPE SELECTION										
AREA ID NUMBER	FROM M.H.	TO M.H.	AREA (2-YEAR) (ha)	AREA (5-YEAR) (ha)	AREA (10-YEAR) (ha)	AREA (100-YEAR) (ha)	AREA (ROOF) (ha)	C (2-YEAR) (-)	C (5-YEAR) (-)	C (10-YEAR) (-)	C (100-YEAR) (-)	A x C (2-YEAR)	ACCUM AxC (2YR) (ha)	A x C (5-YEAR)	ACCUM. AxC (5YR) (ha)	A x C (10-YEAR)	ACCUM. AxC (10YR) (ha)	A x C (100-YEAR)	ACCUM. AxC (100YR) (ha)	T of C (min)	$I_{2\text{-YEAR}}$ (mm/h)	$I_{5\text{-YEAR}}$ (mm/h)	$I_{10\text{-YEAR}}$ (mm/h)	$I_{100\text{-YEAR}}$ (mm/h)	$Q_{CONTROL}$ (L/s)	ACCUM. $Q_{CONTROL}$ (L/s)	Q_{ACT} (CIA/360) (L/s)	LENGTH (m)	PIPE WIDTH OR DIAMETEI (mm)	PIPE HEIGHT (mm)	PIPE SHAPE (-)	MATERIAL (-)	CLASS (-)	SLOPE %	Q_{CAP} (FULL) (L/s)	% FULL (-)	VEL. (FULL) (m/s)	VEL. (ACT) (m/s)	TIME OF FLOW (min)
C310A	310	309	0.00	0.09	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.000	0.000	0.062	0.062	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	18.0	4.9	300	300	CIRCULAR	PVC	-	0.34	56.1	**32.10%**	0.80	0.60	0.14
	309	308	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.062	0.000	0.000	0.000	0.000	10.14	76.29	103.48	121.30	177.33	0.0	0.0	17.9	11.5	300	300	CIRCULAR	PVC	-	0.34	56.1	**31.88%**	0.80	0.60	0.32
	308	306	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.062	0.000	0.000	0.000	0.000	10.46	75.10	101.85	119.38	174.50	0.0	0.0	17.6	8.8	300	300	CIRCULAR	PVC	-	0.34	56.1	**31.38%**	0.80	0.59	0.25
																				10.70																			
	307	306	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	19.8	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
C306A	306	304	0.00	0.12	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.000	0.000	0.096	0.158	0.000	0.000	0.000	0.000	10.70	74.20	100.62	117.93	172.37	0.0	0.0	44.2	36.4	300	300	CIRCULAR	PVC	-	0.34	56.1	**78.85%**	0.80	0.78	0.78
																				11.48																			
	305	304	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	19.7	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
C304A	304	302	0.00	0.15	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.000	0.000	0.124	0.282	0.000	0.000	0.000	0.000	11.48	71.55	96.97	113.64	166.07	0.0	0.0	76.0	37.1	450	450	CIRCULAR	PVC	-	0.20	131.3	**57.88%**	0.80	0.72	0.87
																				12.35																			
	303	302	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	19.2	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
	302	301	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.282	0.000	0.000	0.000	0.000	12.35	68.84	93.24	109.25	159.62	0.0	0.0	73.1	21.2	450	450	CIRCULAR	PVC	-	0.20	131.3	**55.65%**	0.80	0.71	0.50
																				12.84									1800	1200									
C512A	512	511	0.00	0.09	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.000	0.000	0.061	0.061	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	17.6	11.1	300	300	CIRCULAR	PVC	-	0.34	56.1	**31.37%**	0.80	0.59	0.31
	511	510	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	10.31	75.62	102.57	120.23	175.75	0.0	0.0	17.3	11.8	300	300	CIRCULAR	PVC	-	0.34	56.1	**30.89%**	0.80	0.59	0.33
	510	508	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	10.65	74.41	100.90	118.27	172.86	0.0	0.0	17.0	12.4	300	300	CIRCULAR	PVC	-	0.34	56.1	**30.38%**	0.80	0.58	0.35
																				11.00																			
	509	508	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	20.5	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
C508A	508	506	0.00	0.10	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.000	0.000	0.084	0.145	0.000	0.000	0.000	0.000	11.00	73.17	99.19	116.25	169.91	0.0	0.0	40.0	31.0	300	300	CIRCULAR	PVC	-	0.34	56.1	**71.36%**	0.80	0.76	0.68
																				11.68																			
	507	506	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	20.7	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
C506A	506	504	0.00	0.11	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.000	0.000	0.089	0.234	0.000	0.000	0.000	0.000	11.68	70.89	96.07	112.58	164.51	0.0	0.0	62.4	34.4	375	375	CIRCULAR	PVC	-	0.26	84.0	**74.23%**	0.80	0.77	0.75
																				12.43																			
	505	504	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	20.7	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
C504A	504	503	0.00	0.07	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.000	0.000	0.058	0.292	0.000	0.000	0.000	0.000	12.43	68.58	92.89	108.84	159.02	0.0	0.0	75.3	33.7	450	450	CIRCULAR	PVC	-	0.20	131.3	**57.35%**	0.80	0.72	0.79
	503	502	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.292	0.000	0.000	0.000	0.000	13.22	66.32	89.80	105.19	153.67	0.0	0.0	72.8	11.4	450	450	CIRCULAR	CONCRETE	-	0.20	131.3	**55.44%**	0.80	0.70	0.27
C502A	502	501	0.00	0.12	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.000	0.000	0.067	0.359	0.000	0.000	0.000	0.000	13.49	65.58	88.78	104.00	151.92	0.0	0.0	88.5	23.4	450	450	CIRCULAR	CONCRETE	-	0.20	131.3	**67.35%**	0.80	0.75	0.52
																				14.01									1800	1200									
	104	103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	32.4	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
	103	102	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	10.4	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
C102A	102	100	0.00	0.14	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.000	0.000	0.108	0.108	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	31.1	28.3	300	300	CIRCULAR	PVC	-	0.34	56.1	**55.45%**	0.80	0.70	0.67
																				10.67									300	300									
	703	702	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	20.7	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
	704	702	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	15.1	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00																			
	702	701	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.00	76.81	104.19	122.14	178.56	0.0	0.0	0.0	25.5	300	300	CIRCULAR	PVC	-	0.34	56.1	**0.00%**	0.80	0.00	0.00
																				10.00									375	375									

APPENDIX D

Appendix D Geotechnical Information

GEMTEC
Consulting Engineers and Scientists

GEMTEC Consulting Engineers and Scientists Limited
32 Steacie Drive
Ottawa, ON, Canada
K2K 2A9
613.836.1422
ottawa@gemtec.ca
www.gemtec.ca

May 23, 2023

File: 102128.003

Cavanagh Developments
9094 Cavanagh Road
Ashton, Ontario
K0A 1B0

Attention: Erin O'Connor, MCIP, RPP, General Manager, Land Development

Re: Cope Drive Blocks 24, 43, 46 and 104
Trail West Subdivision
Kanata, City of Ottawa, Ontario

INTRODUCTION

It is understood that plans are being prepared to develop Cope Drive, Blocks 24, 43, 46 and 104 at the Trail West subdivision in Kanata South, in the City of Ottawa, Ontario.

The Trail West subdivision was formerly referred to as the Soho West development which has been the subject of previous investigation and reporting by GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) and others. The majority of the blocks within the subdivision have been developed previously and are currently occupied.

This letter, in combination with previous reports which are referenced in this letter, provides geotechnical commentary on the proposed works at the vacant blocks identified along Cope Drive (i.e. 24, 43, 46 and 104). GEMTEC was retained by Cavanagh Developments to prepare this letter. Additional geotechnical investigations at the blocks are not part of the current scope of work.

SUMMARY OF PROPOSED WORKS

A combination of "Back-to-Back" and conventional townhome units will be constructed on the blocks. Details of the units were provided to GEMTEC via a series of drawings which include GP-1, Cope Drive Units Grading Plan prepared by Stantec Consulting Ltd. (Stantec) dated April 2023, and a series of architectural drawings prepared by M David Blakely Architect Inc. Based on these drawings it is understood that:

- The units will be provided with a basement level with conventional below slab and perimeter foundation drainage measures:

- Original ground elevation is estimated to be about 0.5 to 2 metres below existing ground elevation in general, and possibly locally up to 2.5 metres, according to information provided by Stantec.
- The proposed Under Side of Foundation (USF) of the units in the relevant blocks range as indicated below:
    - Bock 24: from 95.0 to 95.2 metres, approximately;
    - Block 43: 95.0 metres, approximately;
    - Block 46: from 95.1 to 95.4 metres, approximately;
    - Block 104: 95.3 metres, approximately
- Maximum proposed Finished Grade of the units in the relevant blocks range as indicated below:
    - Bock 24: 97.3 metres approximately;
    - Block 43: 96.8 metres, approximately;
    - Block 46: 97.5 metres, approximately;
    - Block 104: 96.7 metres, approximately.

Relatively short surficial access roads and driveways will be constructed to the units. Underground municipal services will also be constructed.

In addition, the structural engineers to Cavanagh Developments have provided GEMTEC information on anticipated foundation loads for the proposed structures under Serviceability Limit State conditions.

SUMMARY OF AVAILABLE INFORMATION

Previous Investigations by GEMTEC

Previous geotechnical investigations have been undertaken in the general area of the proposed blocks at various stages from about 1985. In summary, the soils in the area of the subdivision consist of a combination of fill material (engineered and uncontrolled), over deposits of sensitive silty clay and glacial till which overly bedrock. Previously, peat was present at the site of the subdivision.

GEMTEC, formerly Houle Chevrier Engineering Ltd. (HCEL), has carried out a series of investigations within the general subdivision and also at the location of the particular blocks which are the subject of this letter. GEMTEC (formerly HCEL) has prepared two geotechnical reports which are relevant to the proposed development at the blocks. A summary of the investigations is provided below. Refer to the reports for more detail. The locations of the previous investigation points considered for each of these reports is provided as an attachment to this letter.

GEMTEC / HCEL 2010

Records of previous investigations at the Trail West subdivision are provided in the Houle Chevrier Engineering report titled, "Geotechnical Investigation, Sohowest Area B, Eagleson Road at Fernbank Road, Ottawa, Ontario". The report, dated May 2010, was prepared by GEMTEC (formerly, HCEL) and submitted to TCK Co-Tenancy. The report included Blocks 43 and 104. Blocks 24 and 46 are adjoining to the areas considered in the report.

GEMTEC 2016

GEMTEC carried out additional investigations at the Cope Road development blocks in 2016 (along with other areas) for an alternative construction approach which, GEMTEC understands, is no longer under consideration. The findings of those investigations were provided in GEMTEC's report titled, "Geotechnical Investigation, Akerson Road and Cope Drive Development, Ottawa, Ontario". The report, dated March 2016, was submitted to Thomas Cavanagh Construction Ltd.

As part of the GEMTEC 2016 investigation 4 boreholes and 4 (piezo)Cone Penetration Test (CPTu) probes were advanced at the development blocks, with 1 borehole and 1 probe on each block. The boreholes and CPTu probes encountered a surficial layer of fill material over a relatively thin silty sand layer which in turn overlies sensitive silty clay. The silty clay extends to significant depth and overlies glacial till and bedrock.

These subsurface conditions are consistent with those encountered during previous investigations at the subdivision.

GEOTECHNICAL COMMENTARY

Construction Approach

Please note – the GEMTEC 2016 report is identified herein for the purposes of identifying the subsurface conditions at the development blocks; the report was prepared for an alternative development which is no longer under consideration. The geotechnical guidelines provided in the GEMTEC / HCEL 2010 report should be followed for works at the development blocks, subject to the following additional specific considerations:

- Fill material was noted to be present on the development blocks. The fill material may be variable in composition and thickness and may include blast rock fill in addition to other materials. In addition, borehole 15-5 at Block 24 identified a layer of organic material below the fill material which may be a former (i.e. buried) topsoil layer. All existing fill material and any former topsoil or otherwise unsuitable material should be removed from beneath the footprint of the buildings and from below any engineered fill material on which the units are supported to expose the native subgrade soils.

- Based on assessments carried out by GEMTEC, the Geotechnical Reaction at Serviceability Limit State (SLS) for the structures bearing on the native deposits of silty clay is estimated to be 65 kilopascals. The factored Geotechnical Resistance at Ultimate Limit State is estimated to be 100 kilopascals.
    - It is recommended that the bearing pressure for each block be confirmed at the time of construction by advancing 2 hand auger probes from the foundation level / exposed subgrade below the fill (whichever is lower) to measure the strength of the clay and the thickness of the weathered clay crust present. Based on the results of the hand auger holes it may be necessary to revise the allowable bearing pressure.
- Based on assessments carried out by GEMTEC, the maximum thickness of engineered fill material that can be placed above the original ground level should be limited to 1.0 metre for engineered fill with a maximum bulk unit weight (compacted) of 18 kilonewtons per cubic metre. The use of expanded polystyrene (EPS) blocks may be incorporated to account for the difference where the required thickness of grade raise fill exceeds this limit. Refer to the GEMTEC / HCEL 2010 report for guidance on the zones around and within the structures where EPS fill may be placed.
- The granular bedding in the service trenches could act as a “French Drain”, which could promote groundwater lowering. As such, in order to reduce the potential for groundwater lowering to occur, seepage barriers should be installed along the service trenches at strategic locations. The seepage barriers should begin at subgrade level and extend vertically through the granular pipe bedding and granular surround to within the native backfill materials, and horizontally across the full width of the service trench excavation. The seepage barriers could consist of 1.5-metre-wide dykes of compacted silty clay. The silty clay should be compacted in maximum 300-millimetre-thick lifts to at least 95 percent of the standard Proctor dry density value. The locations of the seepage barriers could be provided as the design progresses.
- As noted in the GEMTEC / HCEL 2010 report, consideration could be given to providing additional reinforcement to the foundations at key locations, (for instance between the garage and adjacent areas) to reduce the potential for cracks to develop in the structures.

Construction Inspections

The engagement of the services of GEMTEC during construction is recommended to inspect the subsurface conditions throughout the proposed excavations, and to confirm the allowable bearing pressures.

The placing and compaction of engineered fill materials should be inspected to ensure that the materials used conform to the grading and compaction specifications.

CLOSING

We trust this letter is sufficient for your purposes. Do not hesitate to contact the undersigned should you require additional information.

Daire Cummins, M.Sc.

Lauren Ashe, M.A.Sc., P.Eng.
Senior Geotechnical Engineer

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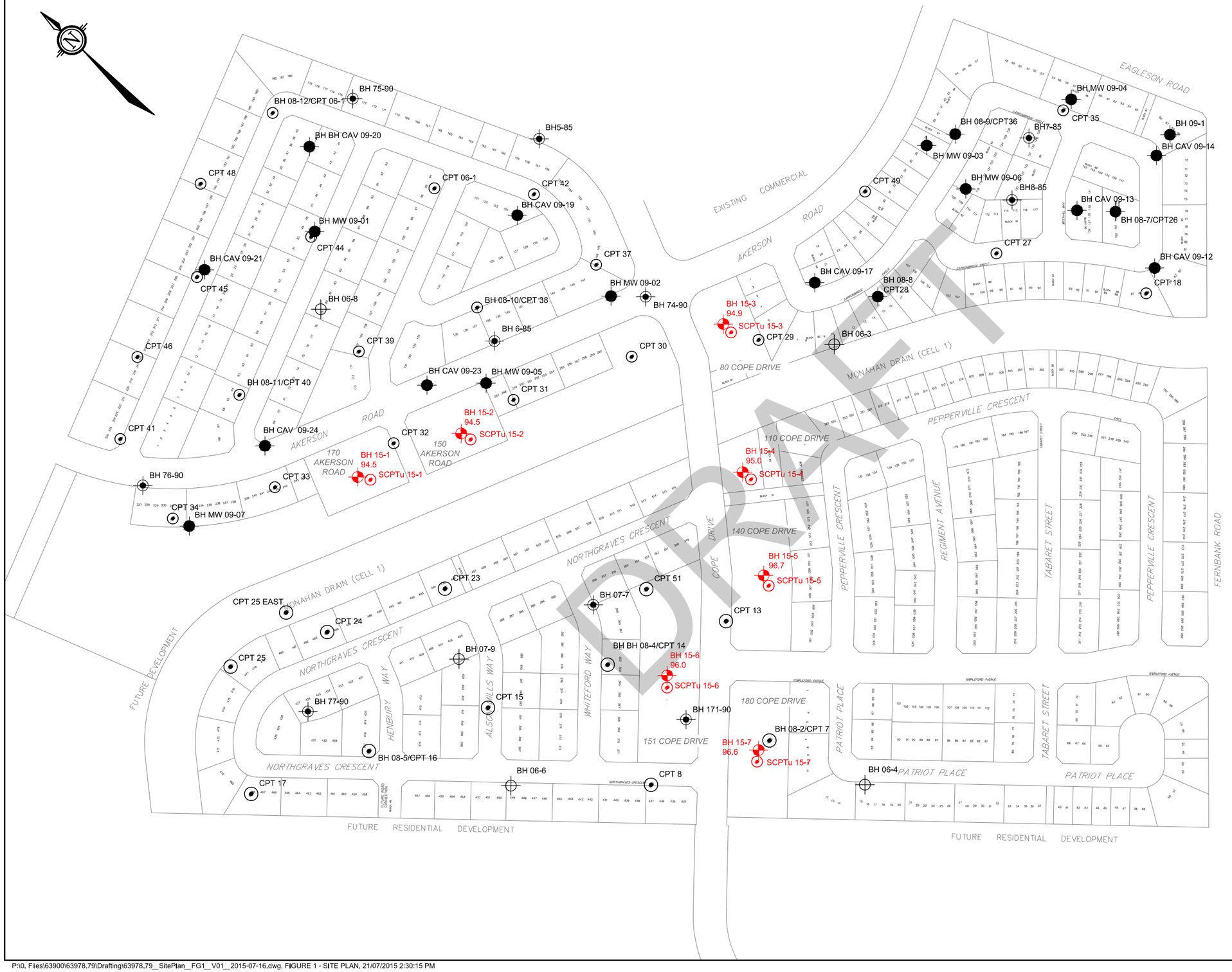


LEGEND

- BH 15-1 / 99.9 — BOREHOLE LOCATION IN PLAN (current investigation by Houle Chevrier Engineering Ltd., 2015)
  - GROUND SURFACE ELEVATION IN METRES GEODETIC DATUM
- SCPTu — CONE PENETRATION TEST LOCATION IN PLAN (current investigation by Houle Chevrier Engineering Ltd., 2015)
- BH 09-1, BH MW09-01, BH CAV 09-09, BHCPT — BOREHOLE LOCATION IN PLAN (previous investigation by Houle Chevrier Engineering Ltd., 2009)
- BH 06-1, BH 07-1 — BOREHOLE LOCATION IN PLAN (previous investigation by Houle Chevrier Engineering Ltd., 2006/2007)
- BH 75-90 — BOREHOLE LOCATION IN PLAN (previous investigation by John D. Patterson Associates)
- CPT/BH08 — CONE PENETRATION TEST/BOREHOLE LOCATION IN PLAN (previous investigation by DST Consulting Engineers)

Scale 1:3000

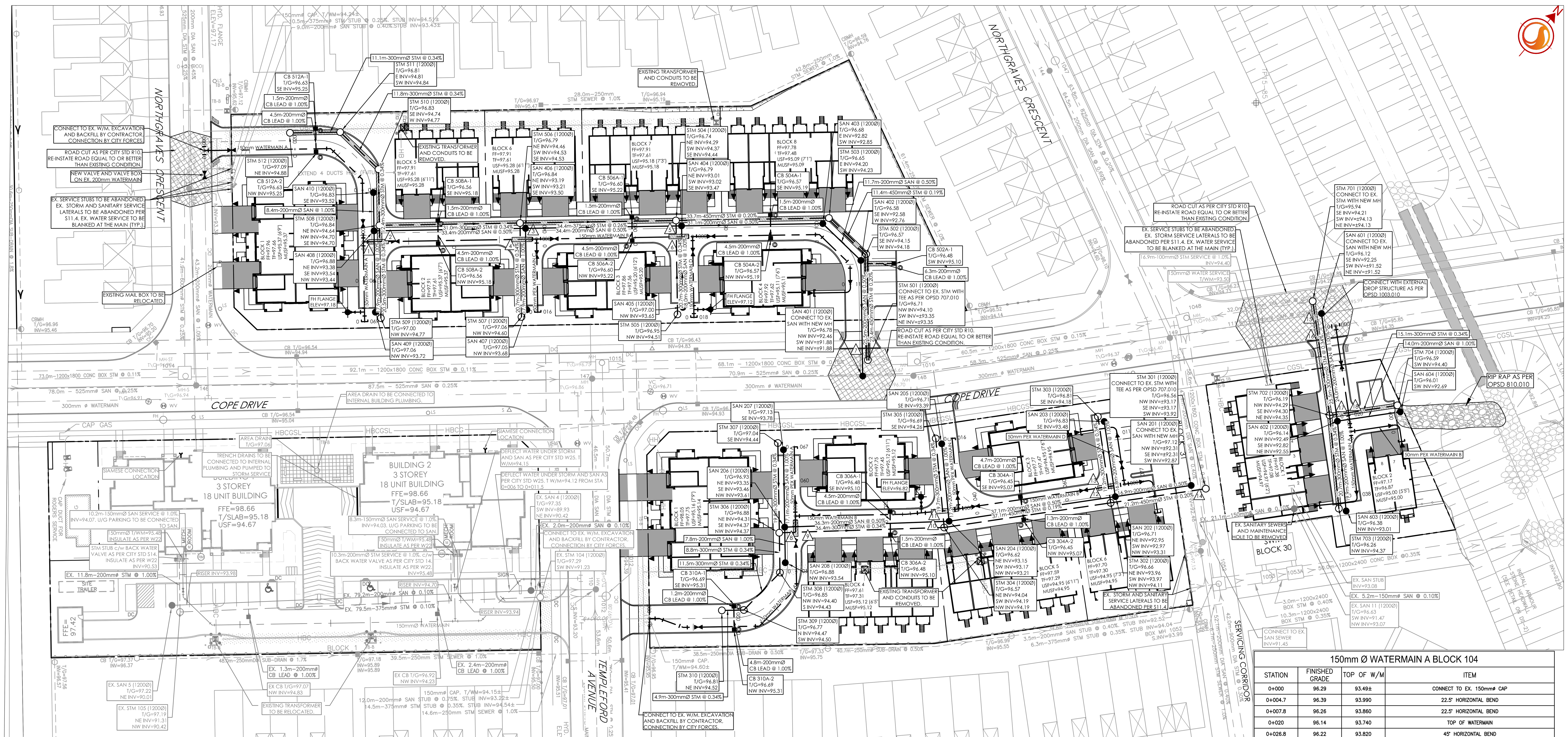
0 100 200m

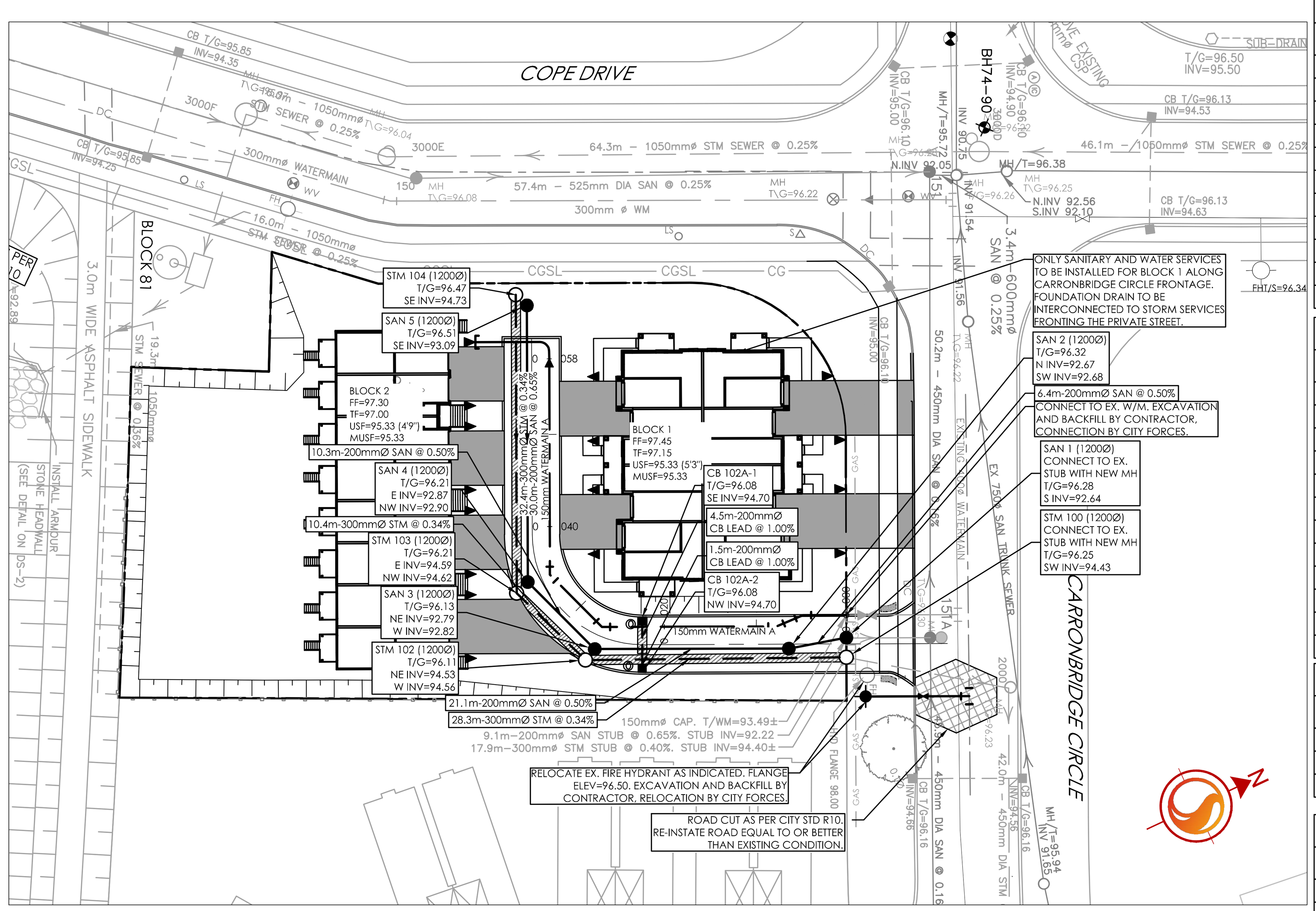
Houle Chevrier Engineering Ltd.
32 Steacie Drive
Ottawa, ON
Tel: (613) 836-1422
www.hceng.ca
ottawa@hceng.ca

Client	SOHO WEST DEVELOPMENT
Project	63978.79
Location	EAGLESON ROAD AT FERNBANK ROAD OTTAWA, ON
Drwn by	P.C.
Chkd by	S.B.
	SITE PLAN
Date	JULY 2015
Rev.	1
	FIGURE 1

APPENDIX E

Appendix E Drawings





150mm Ø WATERMAIN A BLOCK 46

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.98	94.59±	CONNECT TO EX. 150mmø CAP
0+006.0	97.01	94.610	150mmø VALVE AND VALVE BOX
0+020	96.96	94.560	TOP OF WATERMAIN
0+027.9	96.73	94.330	45° HORIZONTAL BEND
0+037.6	96.81	94.410	45° HORIZONTAL BEND
0+040	96.79	94.390	TOP OF WATERMAIN
0+047.4	96.83	94.430	150mmø VALVE AND VALVE BOX
0+051.4	96.85	94.450	150mmø X 150mmø TEE
0+060	96.91	94.510	TOP OF WATERMAIN
0+066.9	97.02	94.620	FIRE HYDRANT TEE
0+069.0	97.02	94.620	150mmø CAP AND THRUST BLOCK

150mm Ø WATERMAIN B BLOCK 46

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.85	94.450	150mmø X 150mmø TEE
0+007.0	96.75	94.350	150mmø VALVE AND VALVE BOX
0+020	96.63	94.230	TOP OF WATERMAIN
0+038.2	96.82	94.420	150mmø X 50mmø TEE
0+042.1	96.76	94.360	150mmø VALVE AND VALVE BOX
0+060	96.66	94.260	TOP OF WATERMAIN
0+072.6	96.76	94.360	150mmø X 150mmø TEE
0+076.7	96.70	94.300	150mmø VALVE AND VALVE BOX
0+080	96.68	94.280	TOP OF WATERMAIN
0+100.6	96.70	94.300	45° HORIZONTAL BEND
0+110.0	96.60	94.200	45° HORIZONTAL BEND
0+114.4	96.60	94.200	150mmø x 50mmø REDUCER

50mm Ø WATERMAIN C BLOCK 46

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.82	94.420	150mmø X 50mmø TEE
0+003.4	96.83	94.430	50mmø VALVE AND VALVE BOX
0+016.1	97.02	94.620	50mmø CAP AND THRUST BLOCK

150mm Ø WATERMAIN D BLOCK 24

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.76	94.360	150mmø X 150mmø TEE
0+003.4	96.78	94.380	150mmø VALVE AND VALVE BOX
0+016.1	96.95	94.550	FIRE HYDRANT TEE
0+017.8	96.97	94.570	150mmø CAP AND THRUST BLOCK

150mm Ø WATERMAIN A BLOCK 43

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.07	±91.74	CONNECT TO EX. 300mmø WATERMAIN
0+008.8	96.21	93.810	150mmø VALVE AND VALVE BOX
0+020.9	96.11	93.710	11.25° HORIZONTAL BEND
0+023.6	96.11	93.710	150mmø X 50mmø TEE
0+037.6	96.22	93.820	150mmø x 50mmø REDUCER

150mm Ø WATERMAIN A BLOCK 24

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	97.13	94.60±	CONNECT TO EX. 150mmø CAP
0+002.1	97.14	94.740	22.5° HORIZONTAL BEND
0+007.8	97.06	94.660	22.5° HORIZONTAL BEND
0+011.1	96.96	94.560	150mmø VALVE AND VALVE BOX
0+020	96.72	94.320	TOP OF WATERMAIN
0+024.6	96.92	94.520	45° HORIZONTAL BEND
0+036.4	96.94	94.540	45° HORIZONTAL BEND
0+040	96.81	94.410	TOP OF WATERMAIN
0+046.1	96.84	94.440	150mmø VALVE AND VALVE BOX
0+052.2	96.89	94.490	150mmø X 150mmø TEE
0+055.8	96.91	94.510	150mmø x 50mmø REDUCER
0+060	96.93	94.530	TOP OF WATERMAIN
0+067.5	97.07	94.670	50mmø CAP AND THRUST BLOCK

150mm Ø WATERMAIN B BLOCK 24

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.89	94.490	150mmø X 150mmø TEE
0+004.6	96.78	94.380	150mmø VALVE AND VALVE BOX
0+020	96.53	94.130	TOP OF WATERMAIN
0+024.5	96.53	94.130	11.25° HORIZONTAL BEND
0+027.8	96.55	94.88	FIRE HYDRANT TEE
0+036.1	96.62	94.220	150mmø X 50mmø TEE
0+039.9	96.56	94.160	150mmø VALVE AND VALVE BOX
0+040	96.56	94.160	TOP OF WATERMAIN
0+060	96.57	94.170	TOP OF WATERMAIN
0+063.9	96.61	94.210	150mmø VALVE AND VALVE BOX
0+073.0	96.80	94.400	150mmø X 50mmø TEE
0+077.3	96.85	94.450	150mmø x 50mmø REDUCER

50mm Ø WATERMAIN C BLOCK 24

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.80	94.400	150mmø X 50mmø TEE
0+002.9	96.83	94.430	50mmø VALVE AND VALVE BOX
0+015.6	96.87	94.470	50mmø CAP AND THRUST BLOCK

50mm Ø WATERMAIN D BLOCK 24

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.80	94.400	150mmø X 50mmø TEE
0+004.3	96.83	94.430	50mmø VALVE AND VALVE BOX
0+011.4	96.87	94.470	50mmø CAP AND THRUST BLOCK

50mm Ø WATERMAIN B BLOCK 43

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.11	93.710	150mmø X 50mmø TEE
0+009.3	96.02	93.620	150mmø x 50mmø REDUCER

150mm Ø WATERMAIN A BLOCK 104

STATION	FINISHED GRADE	TOP OF W/M	ITEM
0+000	96.29	93.49±	CONNECT TO EX. 150mmø CAP
0+004.7	96.39	93.990	22.5° HORIZONTAL BEND
0+007.8	96.26	93.860	22.5° HORIZONTAL BEND
0+020	96.14	93.740	TOP OF WATERMAIN
0+026.8	96.22	93.820	45° HORIZONTAL BEND
0+034.8	96.28	93.880	45° HORIZONTAL BEND
0+040	96.26	93.860	TOP OF WATERMAIN
0+058.2	96.39	93.990	150mmø x 50mmø REDUCER

SCHEDULE OF INLET CONTROL DEVICES

STRUCTURE ID	DRAINAGE AREA ID	ORIFICE SIZE/TYPE	ORIFICE INVERT (m)	100 YEAR HEAD (m)	100 YEAR RELEASE RATE (L/s)
CB102A–1	C102A	102mm IPEX TEMPEST HF	94.70	1.51	23
CB102A–2	C102A	102mm IPEX TEMPEST HF	94.70	1.51	23
CB304A–1	C304A	95mm IPEX TEMPEST HF	95.07	1.53	22
CB304A–2	C304A	95mm IPEX TEMPEST HF	95.07	1.53	22
CB306A–1	C306A	83mm IPEX TEMPEST HF	95.10	1.51	17
CB306A–2	C306A	83mm IPEX TEMPEST HF	95.10	1.51	17
CB310A–1	C310A	83mm IPEX TEMPEST HF	95.31	1.47	16
CB310A–2	C310A	83mm IPEX TEMPEST HF	95.31	1.47	16
CB502A–1	C502A	102mm IPEX TEMPEST HF	95.10	1.50	25
CB504A–1	C504A	75mm IPEX TEMPEST HF	95.19	1.47	13
CB504A–2	C504A	75mm IPEX TEMPEST HF	95.19	1.47	13
CB506A–1	C506A	83mm IPEX TEMPEST HF	95.22	1.51	17
CB506A–2	C506A	83mm IPEX TEMPEST HF	95.22	1.51	17
CB508A–1	C508A	75mm IPEX TEMPEST HF	95.18	1.52	14
CB508A–2	C502A	83mm IPEX TEMPEST HF	95.18	1.52	17
CB512A–1	C512A	75mm IPEX TEMPEST HF	95.25	1.52	14
CB512A–2	C512A	70mm IPEX TEMPEST HF	95.25	1.52	12

SEWER AND WATERMAIN CROSSING TABLE

COSSING	STM INV	STM OBV	SAN INV	SAN OBV	WTR TOP	WTR BTM	NOTES
1	94.71	95.01	93.56	93.76	95.66	95.510	DEFLECT WATER OVER STORM (AS PER W25.2)
2	94.70	95.00	93.38	93.58			
3	94.53	94.83	93.21	93.41			
4	94.54	94.84	93.52	93.72	95.49	95.340	DEFLECT WATER OVER STORM (AS PER W25.2)
5	94.44	94.74	93.02	93.22			
6	94.45	94.75	93.49	93.69	95.40	95.250	DEFLECT WATER OVER STORM (AS PER W25.2)
7	93.35 (93.15)	94.55 (94.75)	92.47	92.67			
8	94.31	94.61	93.46	93.66			
9	94.30	94.60	93.34	93.54	95.25	95.100	DEFLECT WATER OVER STORM (AS PER W25.2)
10	94.19	94.49	93.17	93.37			
11	94.20	94.50	93.22	93.42	95.15	95.000	DEFLECT WATER OVER STORM (AS PER W25.2)
12	94.11	94.41	92.97	93.17			
13	94.12	94.42	93.33	93.53	95.07	94.920	DEFLECT WATER OVER STORM (AS PER W25.2)
14	93.93 (93.85)	94.38 (94.46)	92.31	92.51			
15	94.22	94.52	91.52	92.05			
16	94.22	94.52	92.28	92.48	91.74	91.440	
17	94.35	94.65	92.49	92.69			
18	94.35	94.65	92.57	92.77	93.71	93.560	

* BRACKETS DENOTE ADJUSTED VALUE WITH CONCRETE PIPE THICKNESS

Stantec

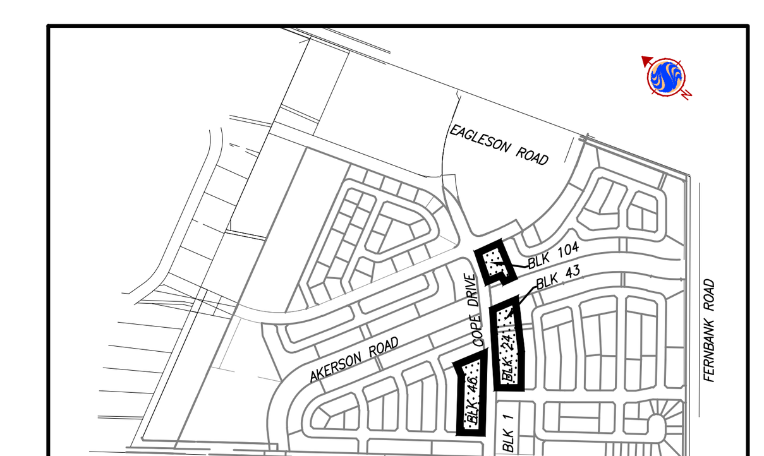
Stantec Consulting Ltd.
400 - 1331 Clyde Avenue
Ottawa ON
Tel. 613.722.4420
www.stantec.com

Legend

- PROPOSED WATERMAIN
- PROPOSED VALVE AND VALVE BOX
- PROPOSED VALVE CHAMBER
- PROPOSED REDUCER
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED REMOTE WATER METER
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED CATCHBASIN
- WATTS AREA DRAIN OR EQUIVALENT
- EXISTING WATERMAIN
- EXISTING VALVE AND VALVE BOX
- EXISTING VALVE CHAMBER
- EXISTING REDUCER
- EXISTING FIRE HYDRANT
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- INSULATION AS PER CITY STANDARD W22 WHERE MIN. 2.4m COVER FOR WATERMAIN, 2.0m COVER FOR STORM SEWERS OR 2.5m FOR SANITARY SEWERS IS NOT PROVIDED

Notes

1. ALL PEAT AND BLAST ROCK INFORMATION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
2. ALL ENGINEERED FILL AND GRADE RAISES TO BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO PLACING OF MATERIAL.
3. ALL PROPOSED BUILDINGS TO BE EQUIPPED WITH BACKWATER VALVES FOR FOUNDATION DRAINAGE.



LOCATION PLAN
N.T.S.

Revision		By	Appd.	YY.MM.DD
1	ISSUED FOR REVIEW	WAJ	KJK	23.06.19

File Name: 160401718-DB	Dwn.	Chkd.	Dsgn.	YY.MM.DD
	WAJ	KJK	WAJ	21.12.20

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
R. J. B. BRANDRICK
100570025
June 22 2023
PROVINCE OF ONTARIO

Client/Project

CAVANAGH CONSTRUCTION LTD.

TRAILS WEST

Ottawa ON Canada

Title

COPE DRIVE UNITS
SITE SERVICING PLAN

Project No. 160401718

Scale 1:500 (0 5 15 25m)

Drawing No. SSP-1

Sheet 1 of 6

Revision 1

D07-12-15-0163

17158

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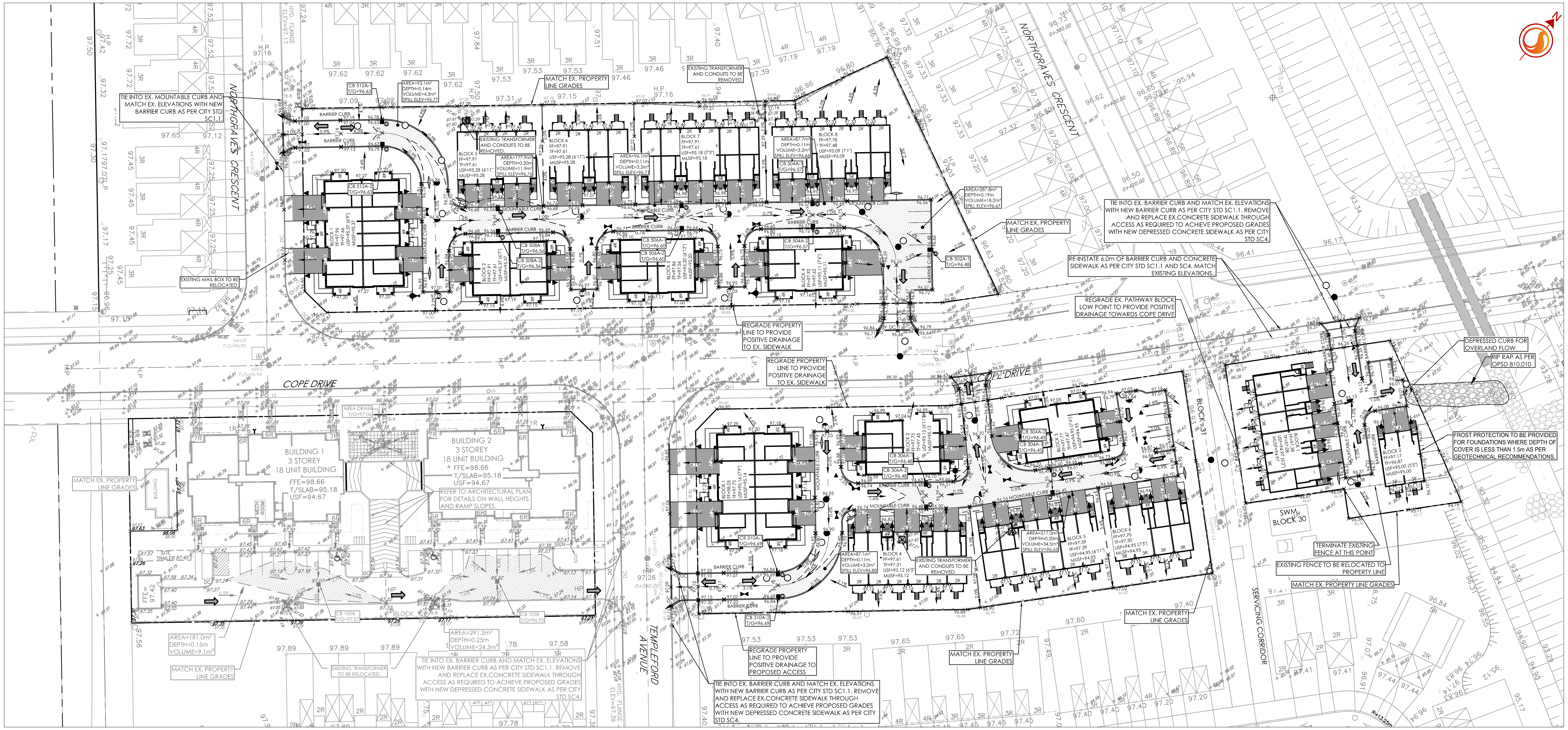
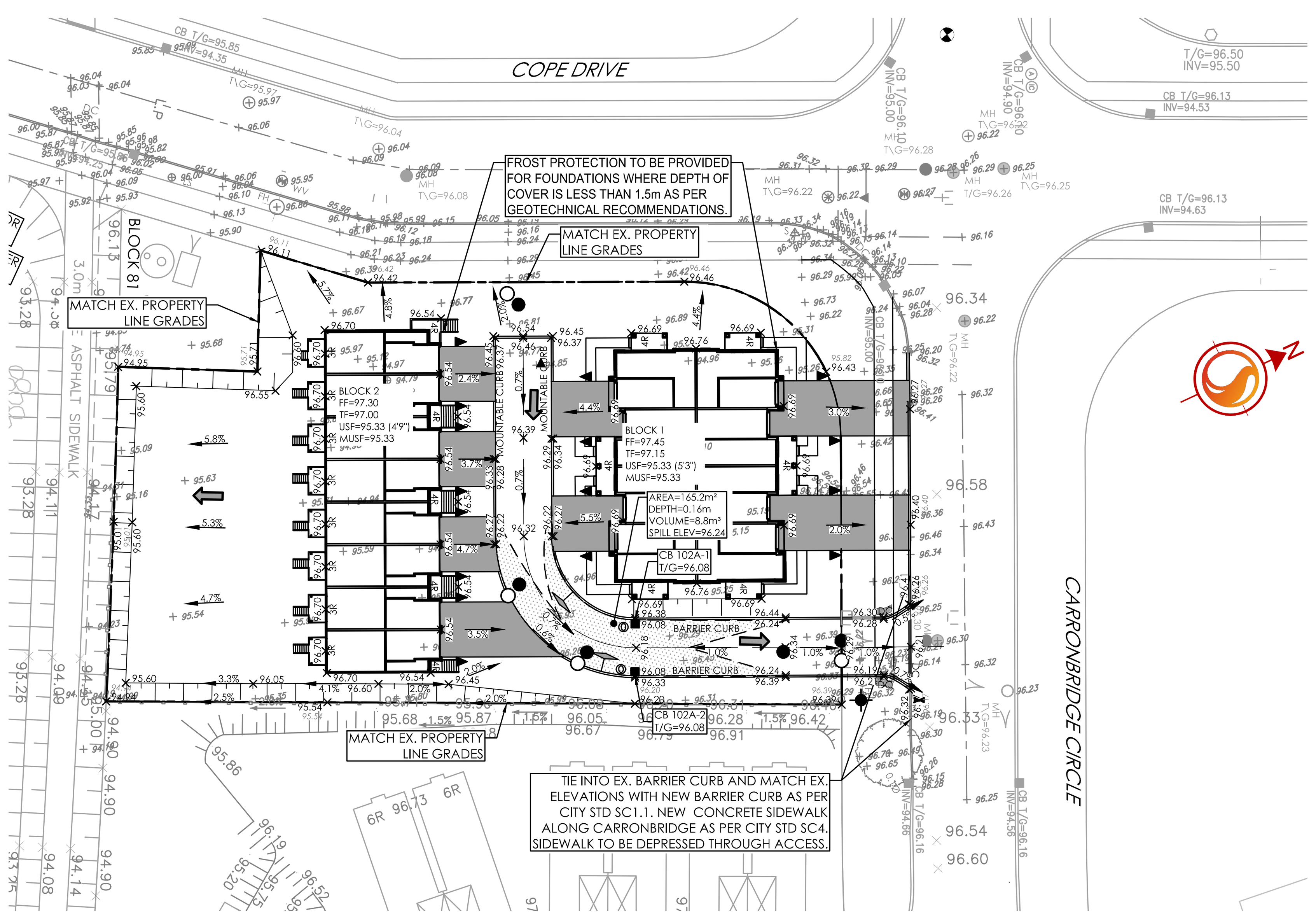
2023/06/19 9:45 AM By: Johnson, Warren

ORIGINAL SHEET - ARCH D





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ORIGINAL SHEET - ARCH D

Stantec

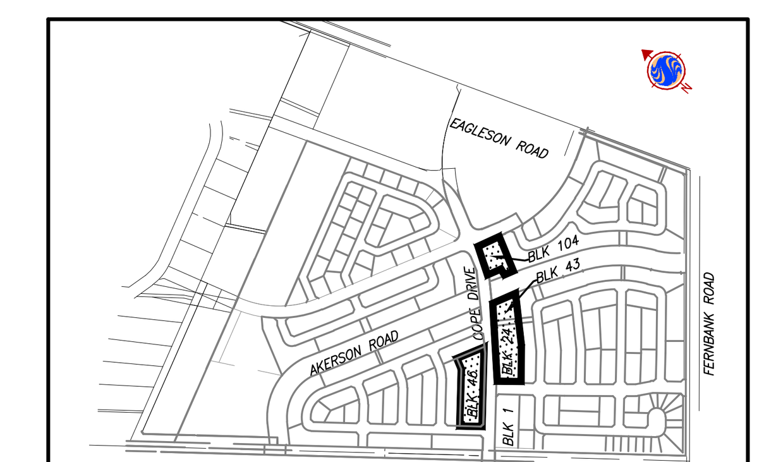
Stantec Consulting Ltd.
400 - 1331 Clyde Avenue
Ottawa ON
Tel. 613.722.4420
www.stantec.com

Legend

3.0%	DIRECTION & PERCENT FLOW
x 75.98	PROPOSED ELEVATION
96.60 / 90.60 ×	PROPOSED LOT CORNER ELEVATION
FFE=97.15	FINISHED FIRST FLOOR ELEVATION
USF=97.15 (7'9")	UNDER SIDE OF FOOTING (BASEMENT HEIGHT)
7R	NUMBER OF RISERS
3:1	TERRACING 3:1 SLOPE OR FLATTER (UNLESS OTHERWISE SHOWN)
	PROPOSED FIRE HYDRANT
	PROPOSED CATCH BASIN
	WATTS AREA DRAIN OR EQUIVALENT
	DIRECTION OF OVERLAND FLOW
96.80 T/W 95.50 B/W	TOP OF RETAINING WALL ELEVATION BOTTOM OF RETAINING WALL ELEVATION
×100.17	ORIGINAL GROUND
0.5%	LONGITUDINAL SWALES WITH SLOPE AND DIRECTION.
	PROPOSED RETAINING WALL

Notes

1. ALL PEAT AND BLAST ROCK INFORMATION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
2. ALL ENGINEERED FILL AND GRADE RAISES TO BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO PLACING OF MATERIAL.
3. ALL PROPOSED BUILDINGS TO BE EQUIPPED WITH BACKWATER VALVES FOR FOUNDATION DRAINAGE.



LOCATION PLAN
N.T.S.

		By	Appd.	YY.MM.DD
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Revision

File Name: 160401718-DB	Dwn.	Chkd.	Dsgn.	YY.MM.DD
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Permit-Seal

LICENSED PROFESSIONAL ENGINEER
R. J. B. BRANDRICK
100570025
June 22 2023
PROVINCE OF ONTARIO

Client/Project

CAVANAGH CONSTRUCTION LTD.

TRAILS WEST

Ottawa ON Canada

Title

COPE DRIVE UNITS
GRADING PLAN

Project No. 160401718

Scale 1:500 (0 5 15 25m)

Drawing No. GP-1

Sheet 2 of 6

Revision 1

D07-12-15-0163

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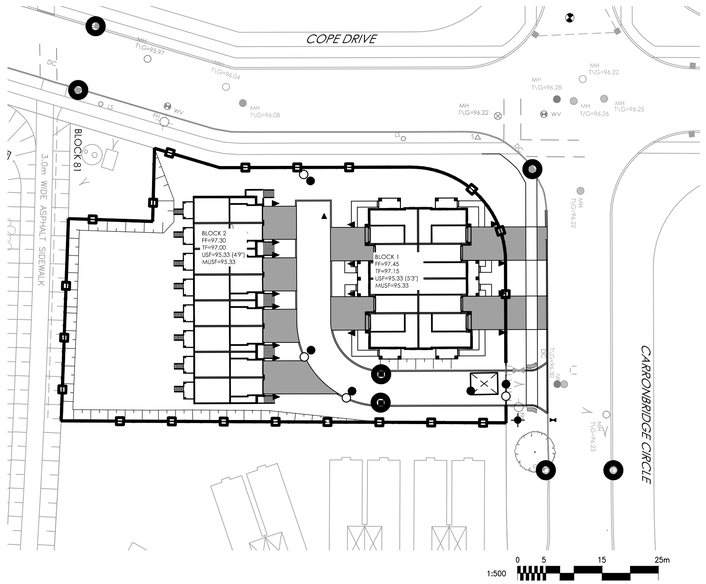
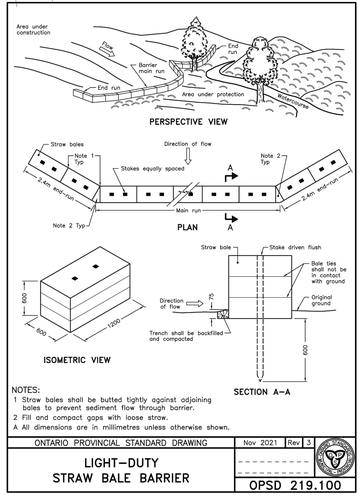
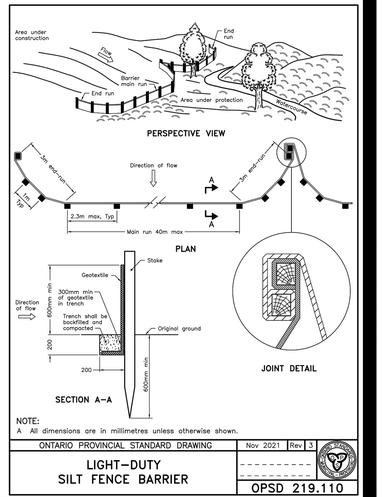
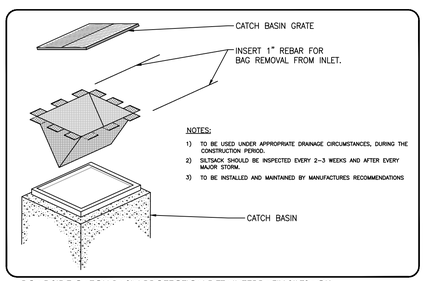
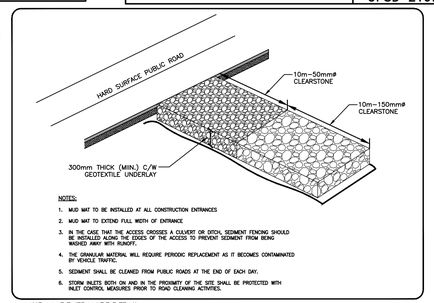








ROADSIDE CATCH BASIN PROTECTION DETAIL:TERRAFIX SILTSACK
SCALE N.T.S.



MUD MAT ENTRANCE DETAIL
SCALE N.T.S.

Stantec

Stantec Consulting Ltd.
400 - 1331 Clyde Avenue
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www.stantec.com

Legend

- PROPOSED SILT FENCE BOUNDARY AS PER OPSD 219.110
- PROPOSED STRAW BALE LOCATION AS PER OPSD 219.100
- PROPOSED MUD MAT LOCATION
- PROPOSED CATCHBASIN PROTECTION AS PER TERRAFIX SILTSACK DETAIL

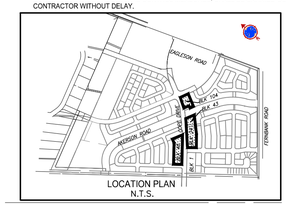
Notes

Best Management Practices

CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROLS (BEST MANAGEMENT PRACTICES) DURING CONSTRUCTION OF THIS PROJECT.

EROSION MUST BE MINIMIZED AND SEDIMENTS MUST BE REMOVED FROM CONSTRUCTION SITE RUN-OFF IN ORDER TO PROTECT DOWNSTREAM AREAS. DURING ALL CONSTRUCTION, EROSION AND SEDIMENTATION SHOULD BE CONTROLLED BY THE FOLLOWING TECHNIQUES:

1. LIMIT THE EXTENT OF EXPOSED SOILS AT ANY GIVEN TIME.
2. REVEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE.
3. MINIMIZE AREA TO BE CLEARED AND GRUBBED.
4. PROTECT EXPOSED SLOPES WITH PLASTIC OR SYNTHETIC MULCHES.
5. INSTALL FILTER CLOTH BETWEEN FRAME AND COVER ON ALL PROPOSED CATCH BASINS AND CATCH BASIN MANHOLES AND ON ALL EXISTING CATCH BASINS THAT WILL RECEIVE RUN-OFF FROM THE SITE.
6. A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF ALL AND ANY STOCKPILES OF MATERIAL TO BE USED OR REMOVED FROM SITE. (LOCATION TO BE DETERMINED)
7. A VISUAL INSPECTION SHALL BE DONE DAILY ON SEDIMENT CONTROL MEASURES AND CLEANED OF ANY ACCUMULATED SILT AS REQUIRED. THE DEPOSITS WILL BE DISPOSED OFF SITE AS PER THE REQUIREMENTS OF THE CONTRACT.
8. SEDIMENT CONTROL BARRIERS MAY ONLY BE REMOVED TEMPORARILY WITH APPROVAL OF CONTRACT ADMINISTRATOR TO ACCOMMODATE CONSTRUCTION OPERATIONS. ALL AFFECTED BARRIERS MUST BE REINSTATED AT NIGHT WHEN CONSTRUCTION IS COMPLETED. NO REMOVAL WILL OCCUR IF THERE IS A SIGNIFICANT RAINFALL EVENT ANTICIPATED (>10mm) UNLESS A NEW DEVICE HAS BEEN INSTALLED TO PROTECT THE EXISTING STORM AND SANITARY SEWER SYSTEMS.
9. NO REFUELING OR CLEANING OF EQUIPMENT IS PERMITTED NEAR ANY EXISTING WATERWAY.
10. CONTRACTOR SHALL REMOVE SEDIMENT CONTROL MEASURES WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE(S) IS NO LONGER REQUIRED. NO CONTROL MEASURES SHALL BE PERMANENTLEY REMOVED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR.
11. THE CONTRACTOR SHALL PERIODICALLY, OR WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENTS AS REQUIRED.
12. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO THE WATERCOURSE. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.



LOCATION PLAN
N.T.S.

1	ISSUED FOR REVIEW	WAJ	KJK	23.06.19
Revision		By	Appd.	YY.MM.DD
File Name: 160401718-D8		WAJ	KJK	21.12.20
		Dwn.	Chkd.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
R. J. B. BRANDRICK
100570525
June 22 2023
PROVINCE OF ONTARIO

Client/Project
CAVANAGH CONSTRUCTION LTD.

TRAILS WEST

Ottawa ON Canada

Title
COPE DRIVE UNITS
EROSION CONTROL PLAN

Project No.	Scale	
160401718	AS NOTED	
Drawing No.	Sheet	Revision
EC-1	3 of 6	1

D07-12-15-0163

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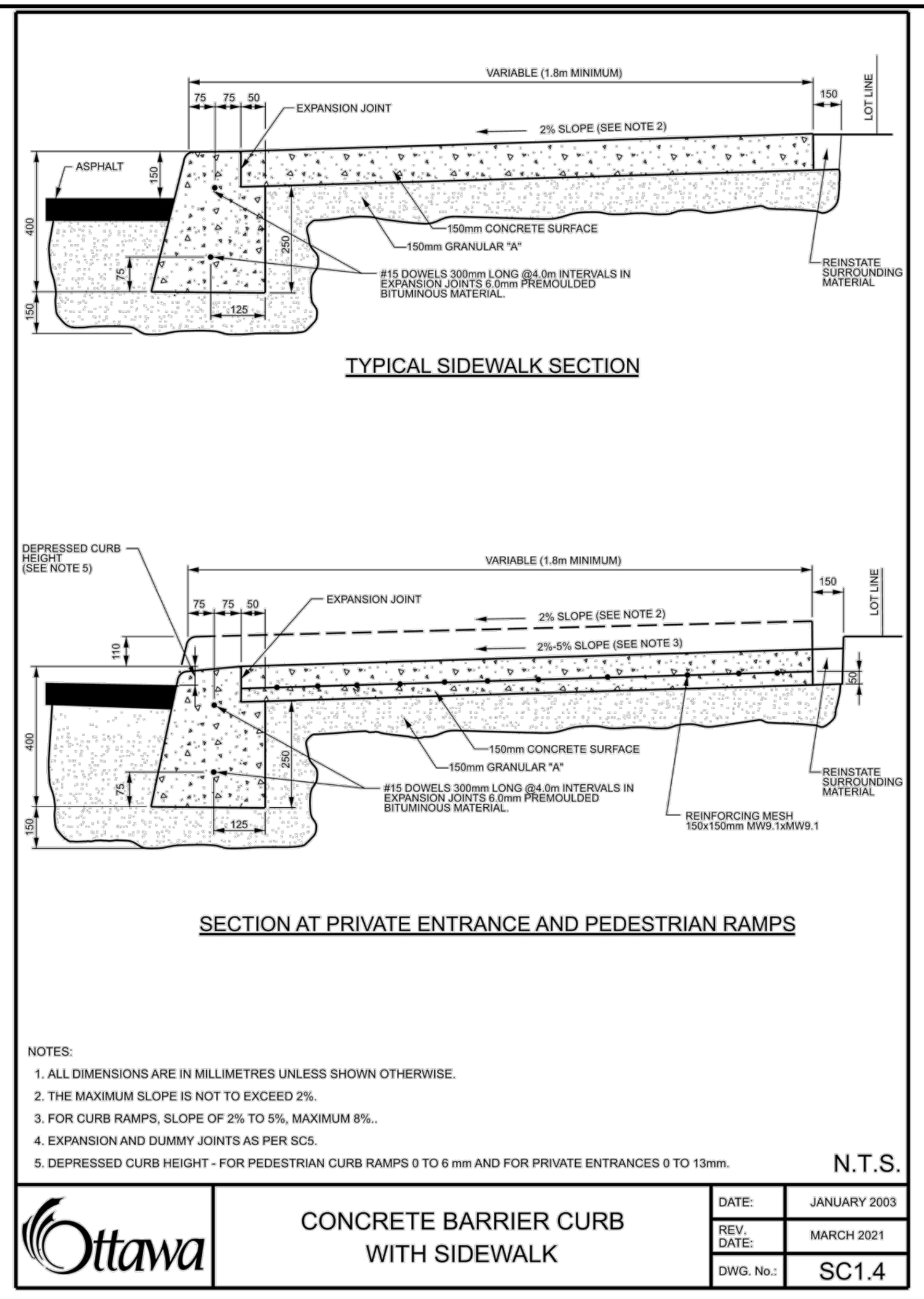
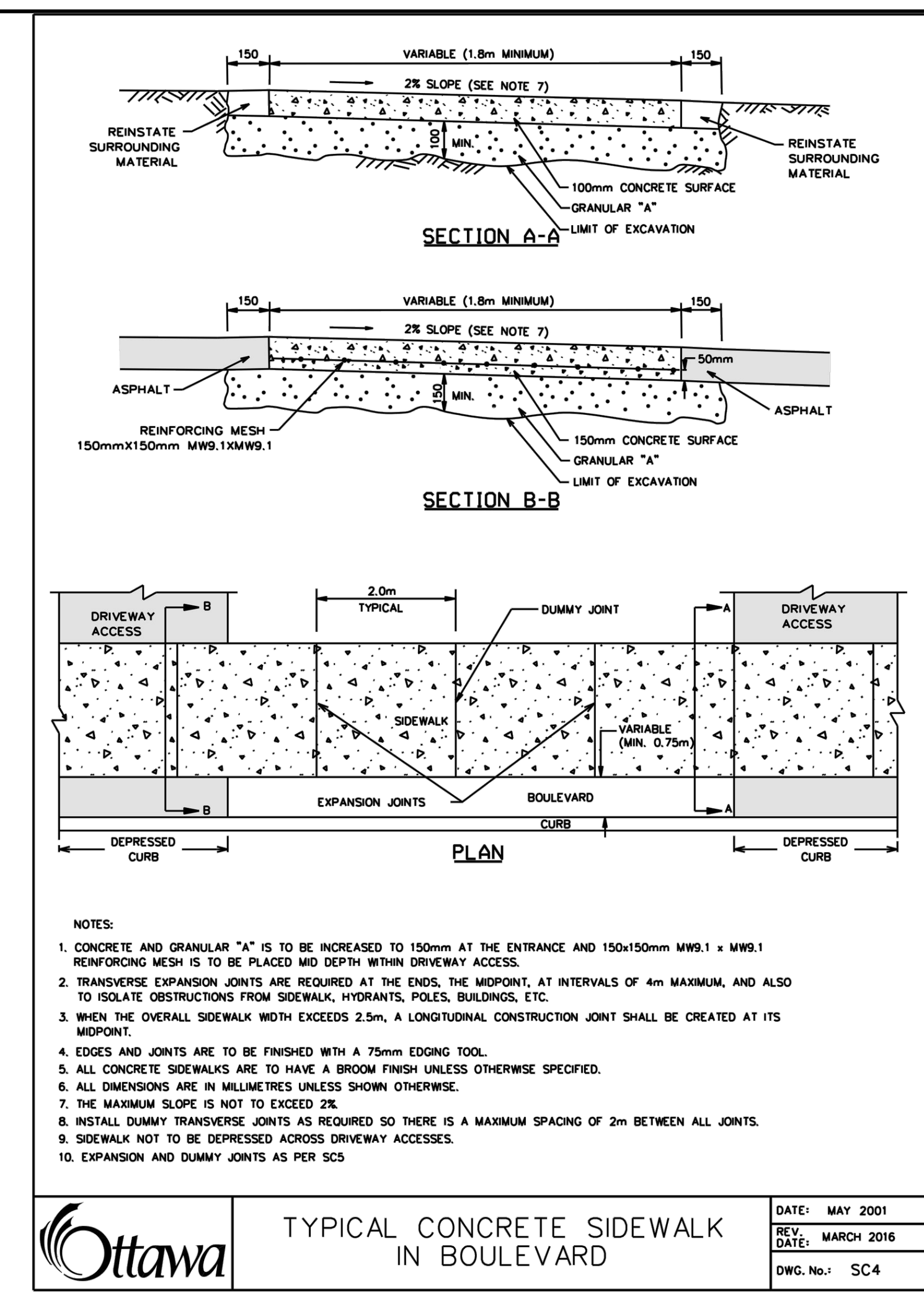
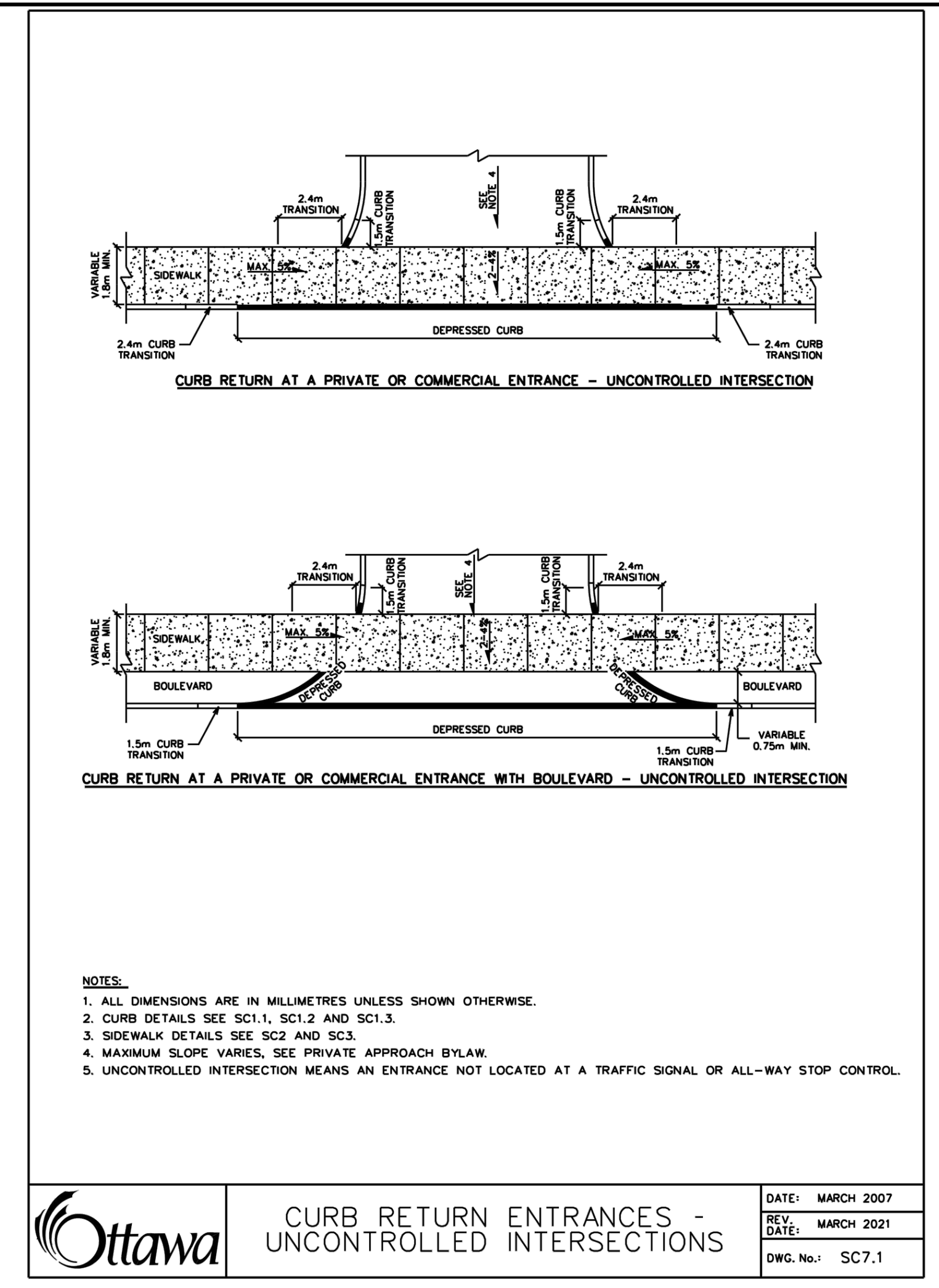
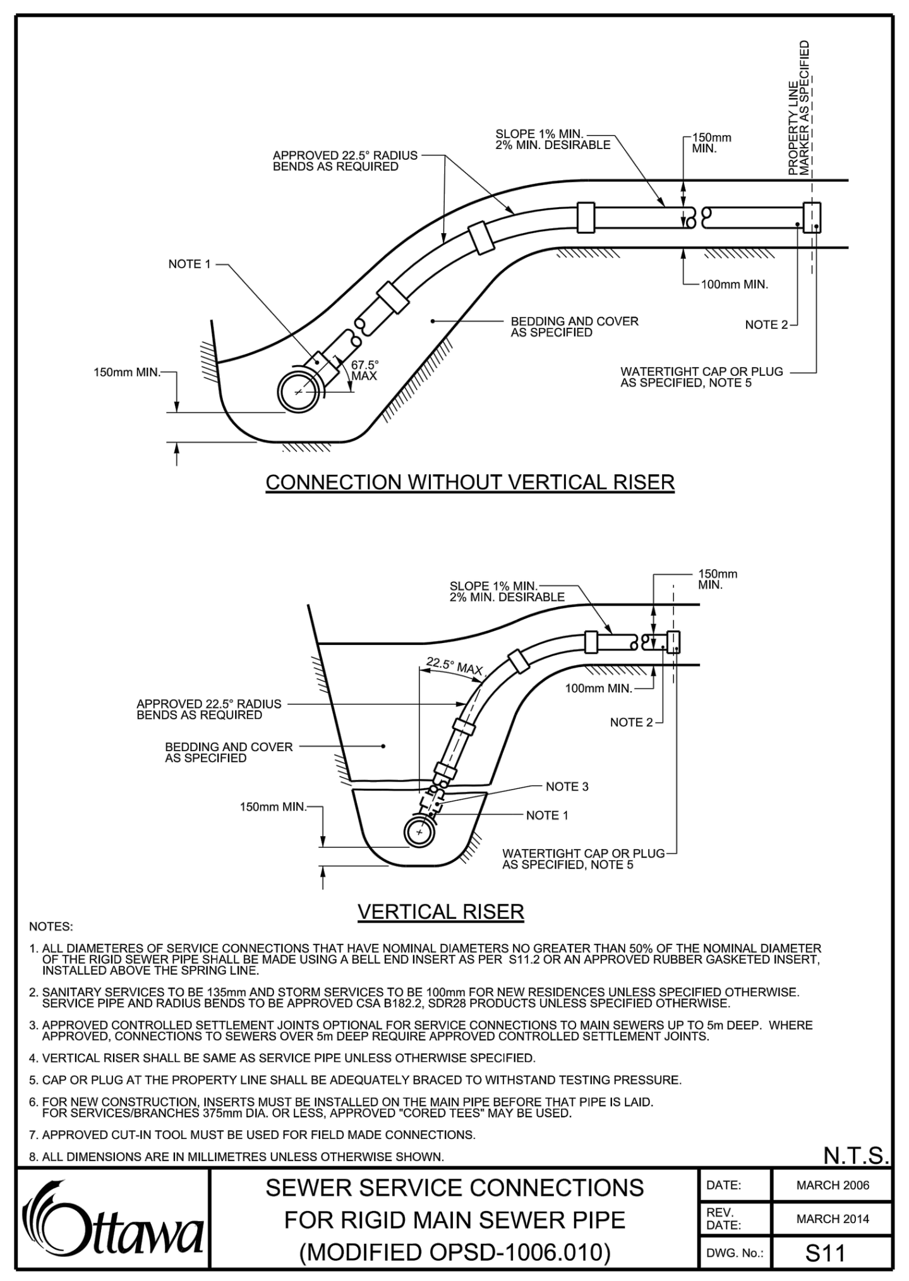
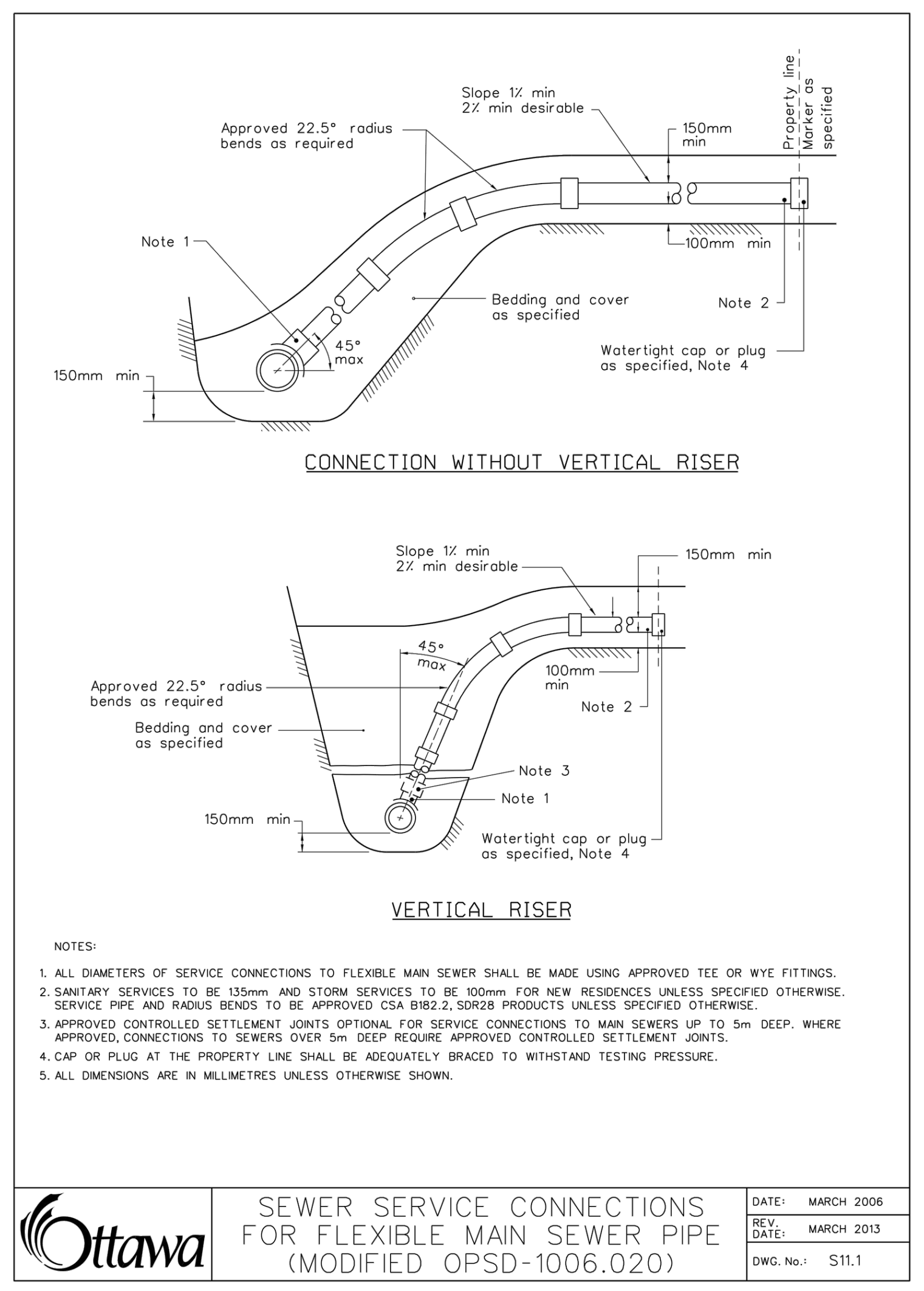
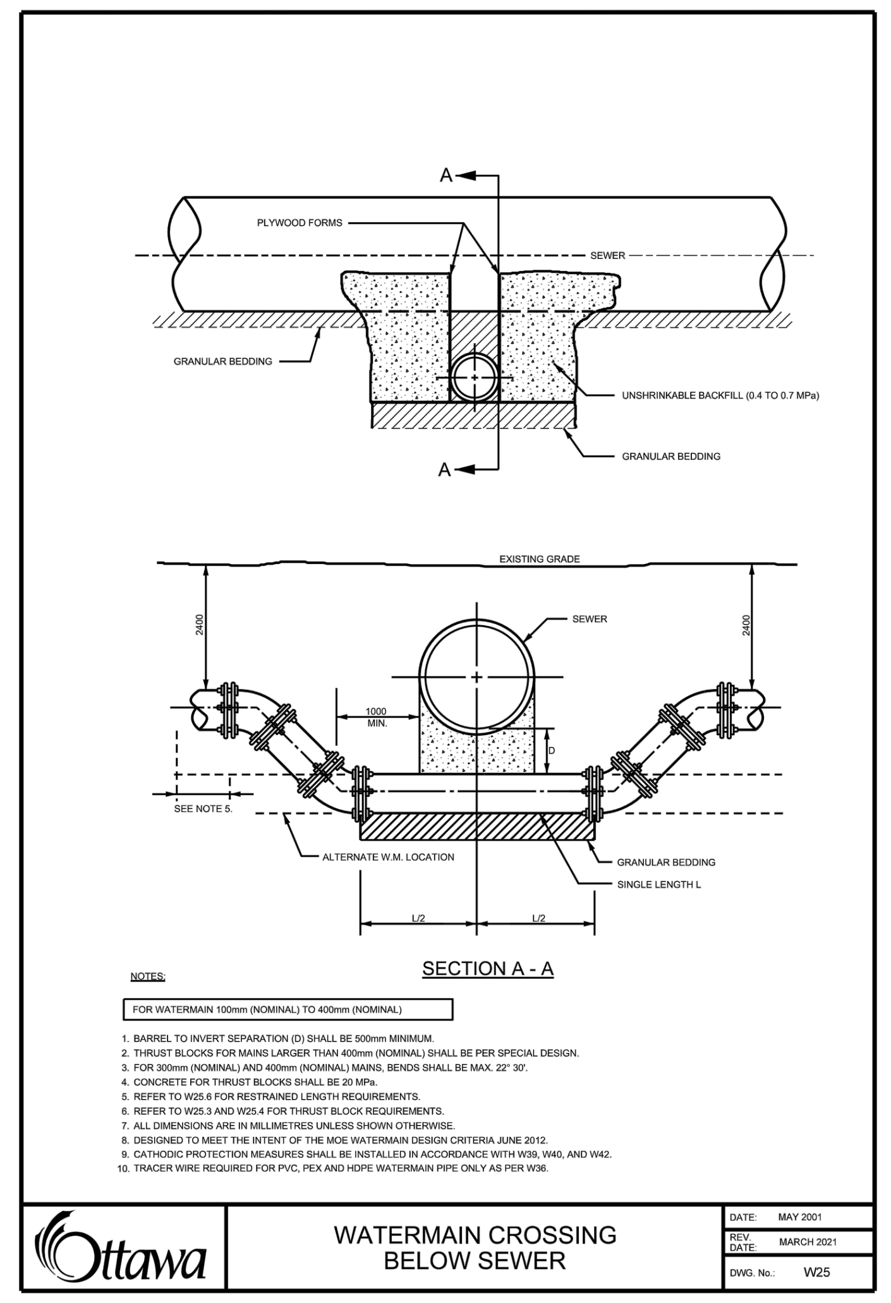


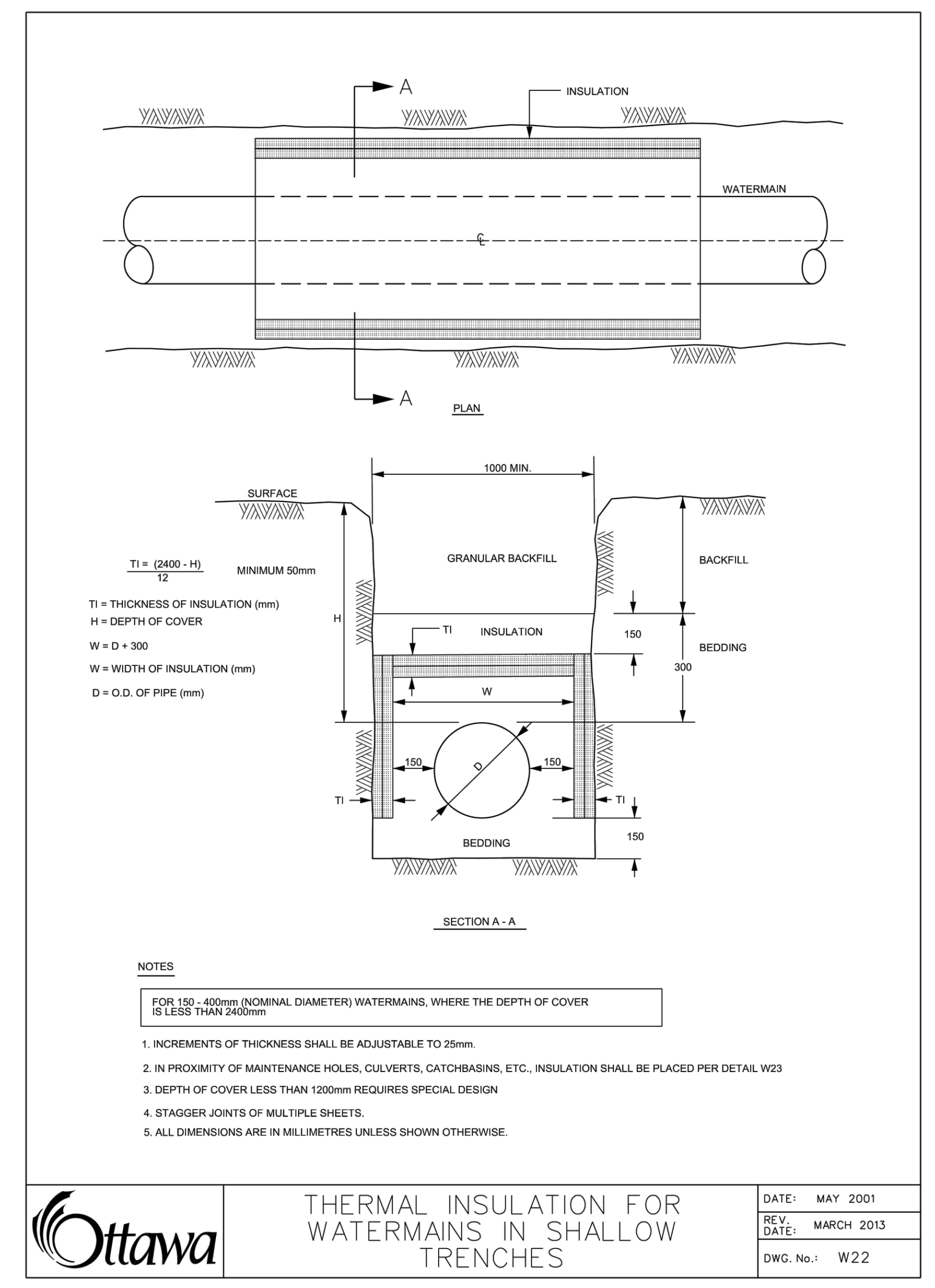


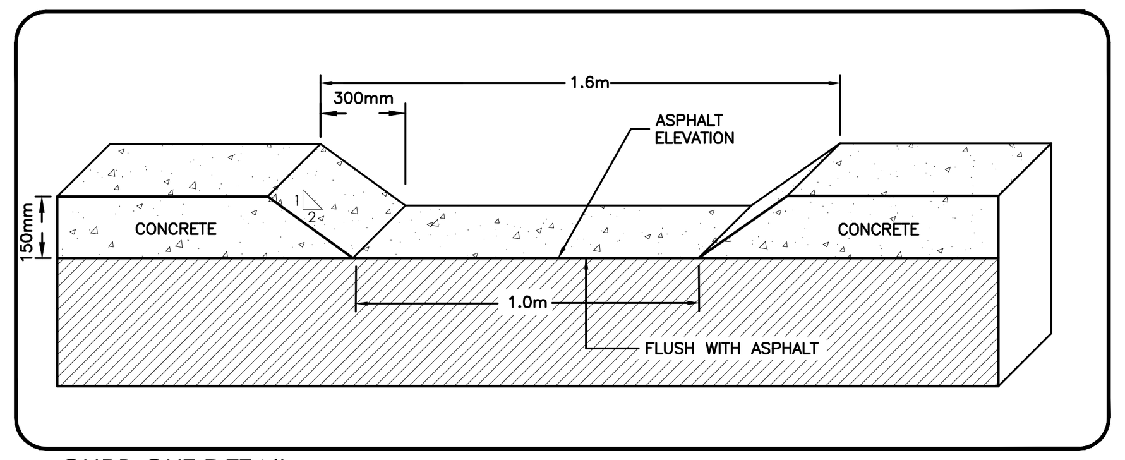


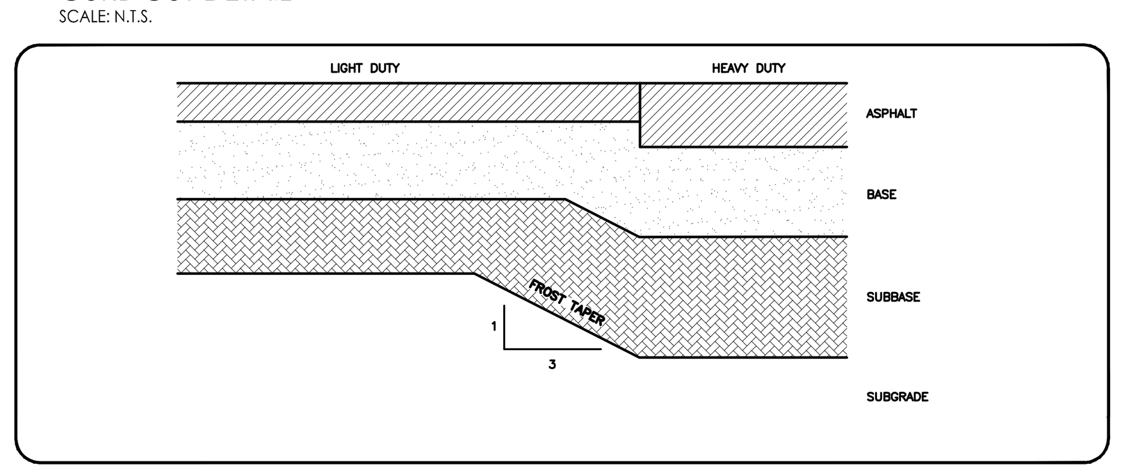


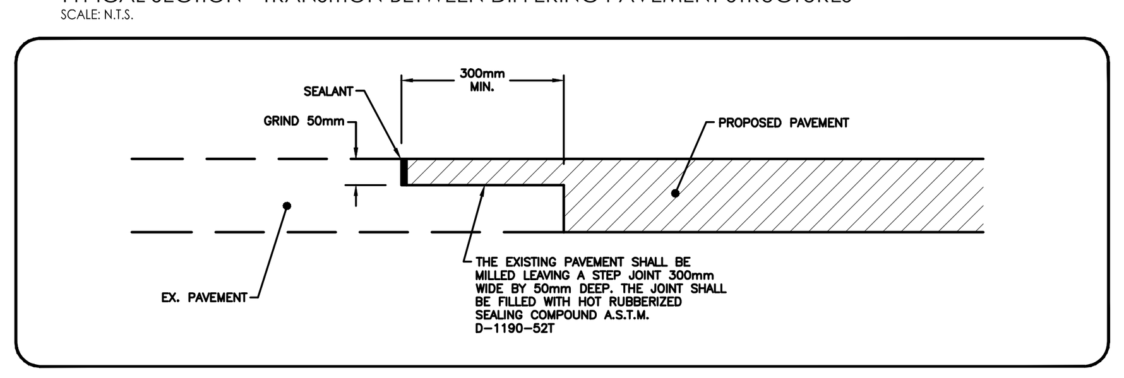







CURB CUT DETAIL
SCALE: N.T.S.


TYPICAL SECTION - TRANSITION BETWEEN DIFFERING PAVEMENT STRUCTURES
SCALE: N.T.S.


MEDIAN/STEP JOINT DETAIL
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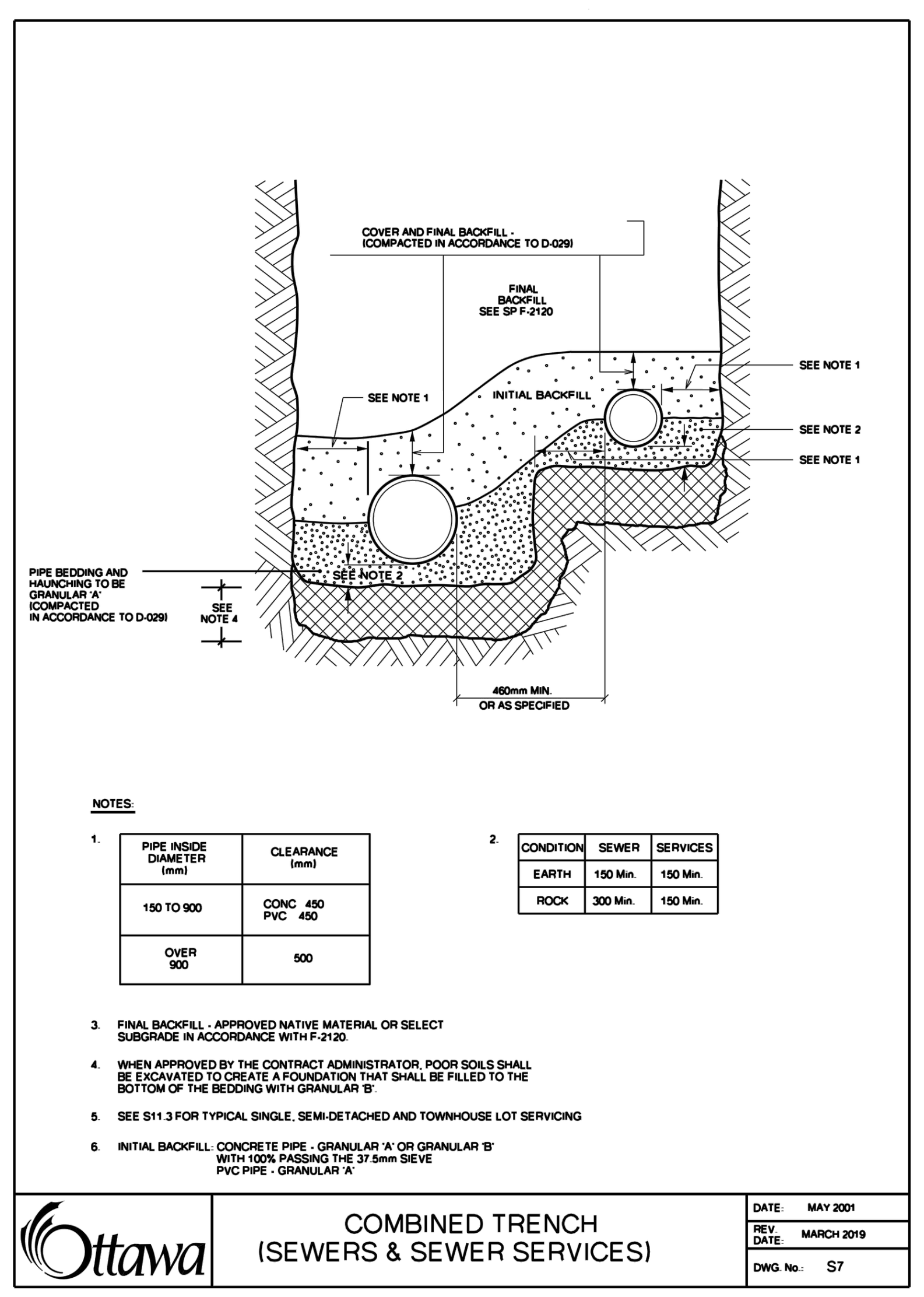

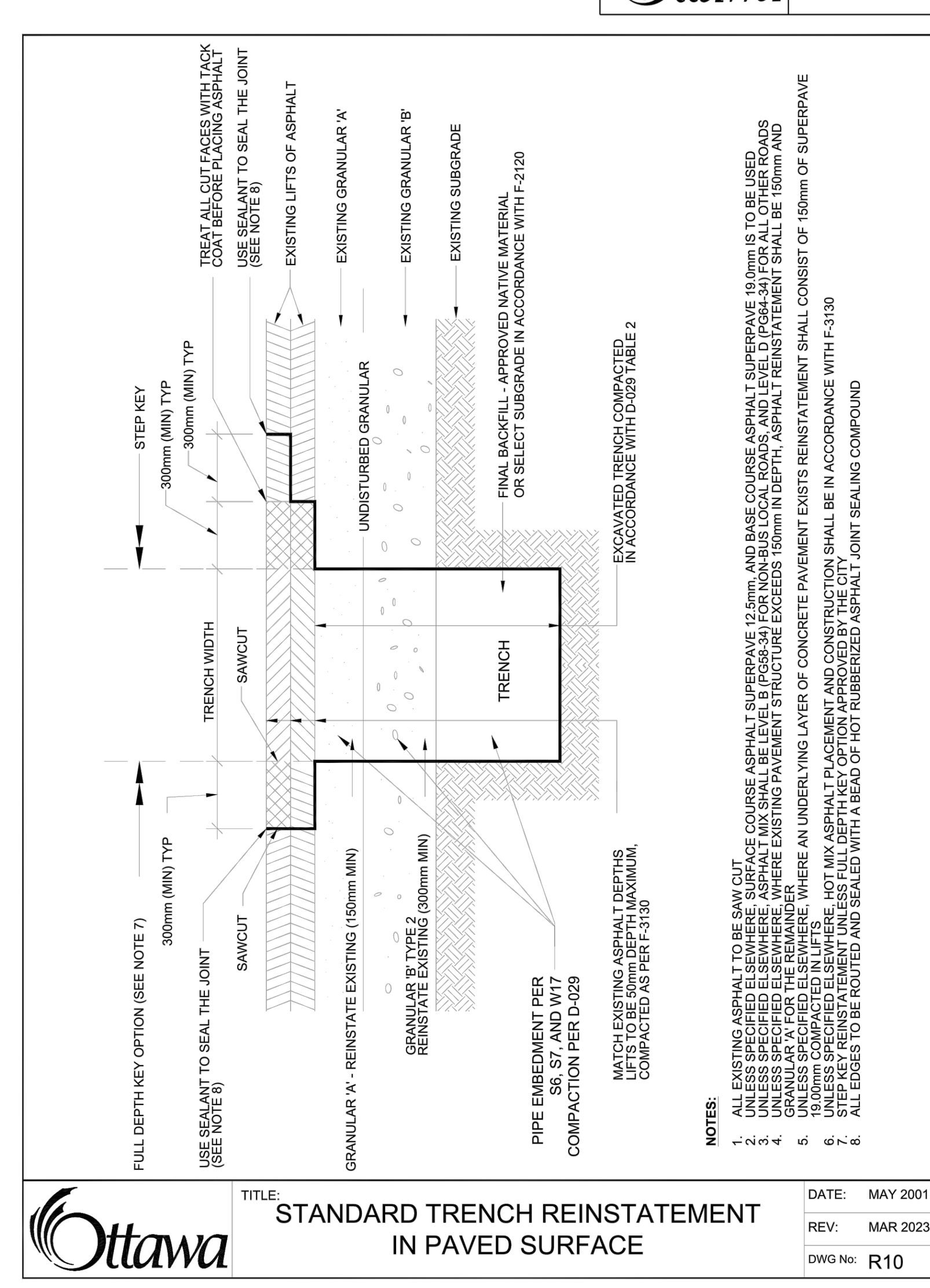

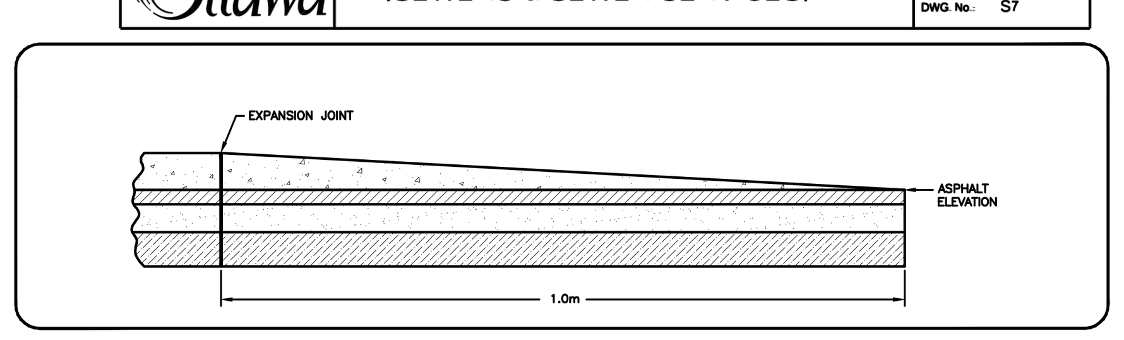
BARRIER CURB END TREATMENT
SCALE: N.T.S.

GENERAL NOTES AND SPECIFICATIONS

1. ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS AND OPSD SUPPLEMENT. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
3. SERVICE AND UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REINSTATEMENT.
4. ALL DISTURBED AREAS SHALL BE REINSTATED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER & THE CITY. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPSD 509.010 AND OPSS 310.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATION FOR CONSTRUCTION PROJECTS". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
6. THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENTATION CONTROL PLAN THAT WILL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION FOR RECEIVING STORM SEWERS OR DRAINAGE DURING CONSTRUCTION ACTIVITIES. THIS PLAN SHALL INCLUDE BUT NOT LIMITED TO FILTER CLOTH ON CATCH BASINS, STRAW BALE CHECK DAMS AND SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS. DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
7. SITE PLAN PREPARED BY DAVID BLAKELY ARCHITECT, INC.
8. TOPOGRAPHIC SURVEY SUPPLIED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
9. LANDSCAPE ARCHITECTURE PLAN PREPARED BY OTHERS . REFER TO ORIGINAL LANDSCAPE ARCHITECTURE PLAN FOR ALL LANDSCAPING FEATURES (ie. TREES, WALKWAYS, PARK DETAILS, NOISE BARRIERS, FENCES etc.)
10. GEOTECHNICAL INVESTIGATION 06-124-3 PREPARED BY HOULE CHEVRIER ENGINEERING DATED MAY 2010 AND GEOTECHNICAL MEMO 102128.003 PREPARED BY GEMTEC DATED MAY 23, 2023. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS MAY BE INTERPOLATED FROM THE ORIGINAL REPORT. REFER TO ORIGINAL GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS AND TO VERIFY ASSUMPTIONS MADE HEREIN.
11. STREET LIGHTING TO CITY OF OTTAWA STANDARDS.
12. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO ENGINEER.
13. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL BY THE CONTRACT ADMINISTRATOR AND DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
14. HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE TO BE NOTIFIED IF DEEPLY BURRIED ARCHEOLOGICAL REMAINS ARE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES.

ROADWORKS

1. ALL TOPSOIL AND ORGANIC MATERIAL TO BE STRIPPED FROM WITHIN THE FULL RIGHT OF WAY PRIOR TO CONSTRUCTION.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.30m LAYERS.
3. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
4. ROAD SUBDRAINS SHALL BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD R1.
5. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
6. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE IF REQUIRED BY THE MUNICIPALITY. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
7. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD R10, AND OPSD 509.010, AND OPSS 310.
8. CONCRETE CURBS SHALL BE CONSTRUCTED AS PER CITY STANDARD SC1.1 AND SC1.3 (BARRIER OR MOUNTABLE CURB AS SHOWN ON DRAWINGS).
9. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SC3 AND SC1.4.
10. PAVEMENT CONSTRUCTION AS PER GEOTECHNICAL INVESTIGATION PREPARED BY HOULE CHEVRIER ENGINEERING LTD. DATED MAY 2010.

    AREAS WITH NO BUS TRAFFIC AND WHERE SUBEXCAVATION OF PEAT AND REPLACEMENT WITH BLAST ROCK HAS BEEN CARRIED OUT (MIN. 300mm SUITABLE BLAST ROCK MATERIAL)
    40mm SUPERPAVE 12.5
    50mm SUPERPAVE 19.0
    150mm OPSS GRANULAR A BASE
    150mm OPSS GRANULAR B TYPE II SUBBASE

    AREAS WITH NO BUS TRAFFIC AND WHERE NATIVE SOILS EXIST AT ROADWAY SUBGRADE ELEVATION
    40mm SUPERPAVE 12.5
    50mm SUPERPAVE 19.0
    150mm OPSS GRANULAR A BASE
    375mm OPSS GRANULAR B TYPE II SUBBASE

    AREAS WITH BUS/TRUCK TRAFFIC AND WHERE NATIVE SOILS EXIST AT ROADWAY SUBGRADE ELEVATION
    40mm SUPERPAVE 12.5
    100mm SUPERPAVE 19.0
    150mm OPSS GRANULAR A BASE
    450mm OPSS GRANULAR B TYPE II SUBBASE

WATER SUPPLY SERVICING

1. THE CONTRACTOR SHALL CONSTRUCT WATERMAIN, WATER SERVICES, CONNECTIONS & APPURTENANCES AS PER CITY OF OTTAWA SPECIFICATIONS & SHALL CO-ORDINATE AND PAY ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION & DISINFECTION BY CITY PERSONNEL.
2. WATERMAIN PIPE MATERIAL SHALL BE PVC CL.150 DR18. DEFLECTION OF WATERMAIN PIPE IS NOT TO EXCEED 1/2 OF THAT SPECIFIED BY THE MANUFACTURER. PVC WATERMAINS TO BE INSTALLED WITH TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W36.
3. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STANDARD W26 (UNLESS OTHERWISE NOTED). WATER SERVICES WITHIN RIGHT OF WAYS TO EXTEND 2.0m BEYOND PROPERTY LINE. STAND POST TO BE INSTALLED AT PROPERTY LINE. WATER SERVICES WITHIN PRIVATE BLOCKS TO EXTEND TO 1.0m FROM PROPOSED FOUNDATIONS. STAND POST TO BE INSTALLED AS SHOWN ON THE SITE SERVICING PLAN (CROSS-SECTION TO BE CONFIRMED PRIOR TO CONSTRUCTION).
4. FIRE HYDRANTS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W18 AND W19.
5. WATER VALVES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W24.
6. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W17 UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL TO BE SPECIFIED BY PROJECT GEOTECHNICAL CONSULTANT.
7. SERVICE CONNECTIONS SHALL BE INSTALLED A MINIMUM OF 2400mm FROM ANY CATCHBASIN, MANHOLE, OR OBJECT THAT MAY CONTRIBUTE TO FREEZING. THERMAL INSULATION SHALL BE INSTALLED ON ALL PROPOSED CB'S ON THE W/M STREET SIDE WHERE 2400mm SEPARATION CANNOT BE ACHIEVED.(AS PER CITY OF OTTAWA W22 & W23)
8. CATHODIC PROTECTION TO BE SUPPLIED ON METALLIC FITTINGS AS PER CITY OF OTTAWA W40 AND W42.
9. THRUST BLOCKS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25.3 AND W25.4.
10. WATERMAIN TO HAVE MIN. 2.4m COVER. WHERE WATERMAIN COVER IS LESS THAN 2.4m, INSULATION TO BE SUPPLIED IN ACCORDANCE WITH CITY STANDARD W22.
11. WATERMAIN CROSSINGS ABOVE AND BELOW SEWERS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W25 AND W25.2.
12. PRESSURE REDUCING VALVES (PRV'S) TO BE INSTALLED AS PER ONTARIO PLUMBING CODE.
13. CONNECTIONS TO EXISTING WATERMAIN ARE TO BE DONE BY CITY FORCES, EXCAVATION AND BACKFILL ARE TO BE PROVIDED BY CONTRACTOR.

STORM AND SANITARY SEWERS

1. SANITARY SEWERS 375mm DIA. OR SMALLER SHALL BE PVC SDR35. SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA A 257.2 CLASS 100D AS PER OPSD 807.010.
2. STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC SDR 35. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA A 257.2 CLASS 100-D AS PER OPSD 807.010
3. ALL STORM AND SANITARY SEWER BEDDING SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S6 AND S7, CLASS "B" BEDDING, UNLESS OTHERWISE NOTED. SUITABLE BEDDING AND COVER MATERIAL TO BE SPECIFIED BY GEOTECHNICAL CONSULTANT.
4. STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPSD-701.01 (UNLESS OTHERWISE NOTED) c/w FRAME AND COVER AS PER CITY OF OTTAWA S24 AND S25. ALL STORM MANHOLES WITH SEWERS 900mm DIA SEWERS AND OVER IN SIZE SHALL BE BENCHED. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300mm SUMPS AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SUMPS.
5. ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, TO BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
6. FOR STORM SEWER INSTALLATION (EXCLUDING CB LEADS) THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE SEWER IS 2.0m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER IS 2.5m OVER PIPE OBVERT.
7. SAFETY PLATFORMS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 404.02.
8. DROP STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01
9. ALL STORM AND SANITARY SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
10. STORM AND SANITARY SERVICE LATERALS TO BE SDR 28 INSTALLED AT MIN. 1.0% SLOPE. SINGLE STORM SERVICES TO BE 100mmØ, SINGLE SANITARY SERVICES TO BE 135mmØ. (SERVICES WITHIN RIGHT OF WAYS TO EXTEND 2.0m BEYOND PROPERTY LINE. SERVICES WITHIN PRIVATE BLOCKS TO EXTEND TO 1.0m FROM PROPOSED FOUNDATIONS)
11. CATCH BASINS SHALL BE IN ACCORDANCE WITH CITY STANDARDS c/w FRAME AND GRATE AS PER S20, AND S21 FOR REAR YARDS, AND S3 FOR STREET CB'S. PROVIDE 150mm ADJUSTED SPACERS. ALL CATCH BASINS SHALL HAVE SUMPS (600mm DEEP). STREET CATCH BASIN LEADS SHALL BE 200mm DIA.(MIN) PVC SDR 35 AT 1.0% GRADE WHERE NOT OTHERWISE SHOWN ON PLAN. CATCH BASINS WILL BE INSTALLED WITH INLET CONTROL DEVICES (ICD) AS PER ICD SCHEDULE ON STORM DRAINAGE PLAN.
12. STREET CATCH BASINS TO BE INSTALLED c/w SUBDRAINS 3m LONG IN FOUR ORTHOGONAL DIRECTIONS OR LONGITUDINALLY WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 300mm BELOW SUBGRADE LEVEL.
13. REAR LOT PERFORATED PIPE TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S29. REAR LOT STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W30 AND W31.
14. SEEPAGE BARRIERS (AS PER S8) SHOULD BE INSTALLED ALONG THE SERVICE TRENCHES AT STRATEGIC LOCATIONS. THE SEEPAGE BARRIERS SHOULD BEGIN AT SUBGRADE LEVEL AND EXTEND VERTICALLY THROUGH THE GRANULAR PIPE BEDDING AND GRANULAR SURROUND TO WITHIN THE NATIVE BACKFILL MATERIALS, AND HORIZONTALLY ACROSS THE FULL WIDTH OF THE SERVICE TRENCH EXCAVATION. THE SEEPAGE BARRIERS COULD CONSIST OF 1.5m WIDE DYKES OF COMPACTED SILTY CLAY. THE SILTY CLAY SHOULD BE COMPACTED IN MAXIMUM 300mm THICK LIFTS TO AT LEAST 95% OF THE MATERIALS SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT STRATEGIC LOCATIONS AT NO MORE THAN 60m INTERVALS IN THE SERVICE TRENCHES. FOR DETAILS REFER TO GEOTECHNICAL INVESTIGATION .
15. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300 mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
16. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 410 AND OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.

GRADING

1. ALL GRANULAR BASE & SUB BASE COURSE MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR MAX. DRY DENSITY.
2. SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.15m LAYERS.
3. ALL DISTURBED GRASSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, WITH SOD ON MIN. 100mm TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.
4. 100 YEAR PONDING DEPTH TO BE 0.30m (MAXIMUM).
5. EMBANKMENTS TO BE SLOPED AT MIN. 3:1, UNLESS OTHERWISE SPECIFIED.
6. ALL SWALES TO BE MIN. 0.15m DEEP WITH MAX. 3:1 SIDE SLOPES UNLESS OTHERWISE NOTED. THE MINIMUM LONGITUDINAL SLOPE TO BE 1.5% OR 1.0% WHEN PERFORATED SUBDRAIN IS INSTALLED.
7. ALL ROOF DOWNSPOUTS TO DISCHARGE TO THE GROUND ONTO SPLASH PADS AND SHALL NOT BE DIRECTED TO THE STORM SEWER , OR THE BUILDING FOUNDATION DRAIN.
8. TOP OF GRATE (T/G) ELEVATIONS FOR ALL STREET CATCHBASINS SHOWN ON PLANS REFER TO THE ELEVATION AT EDGE OF PAVEMENT, OR GUTTERLINE WHERE APPLICABLE.
9. ALL RETAINING WALLS GREATER THAN 1.0m IN HEIGHT ARE TO BE DESIGNED, APPROVED, AND STAMPED BY STRUCTURAL ENGINEER.
10. FENCES OR RAILINGS ARE REQUIRED FOR RETAINING WALLS GREATER THAN 0.60m IN HEIGHT.
11. EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
12. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO TREE CUTTING.
13. REFER TO DRAWING EC-1 FOR EROSION AND SEDIMENT CONTROL DETAILS.
14. FROST PROTECTION TO BE PROVIDED FOR FOUNDATIONS WHERE DEPTH OF COVER IS LESS THAN 1.5m AS PER GEOTECHNICAL RECOMMENDATIONS.

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Legend

Notes

		By	Appd.	YY.MM.DD
1	ISSUED FOR REVIEW	WAJ	KJK	23.06.19

Revision

File Name: 160401718-DB	WAJ	KJK	WAJ	21.12.20
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal

LICENSED PROFESSIONAL ENGINEER
R. J. B. BRANDRICK
100570025
June 22 2023
PROVINCE OF ONTARIO

Client/Project
CAVANAGH CONSTRUCTION LTD.

TRAILS WEST

Ottawa ON Canada

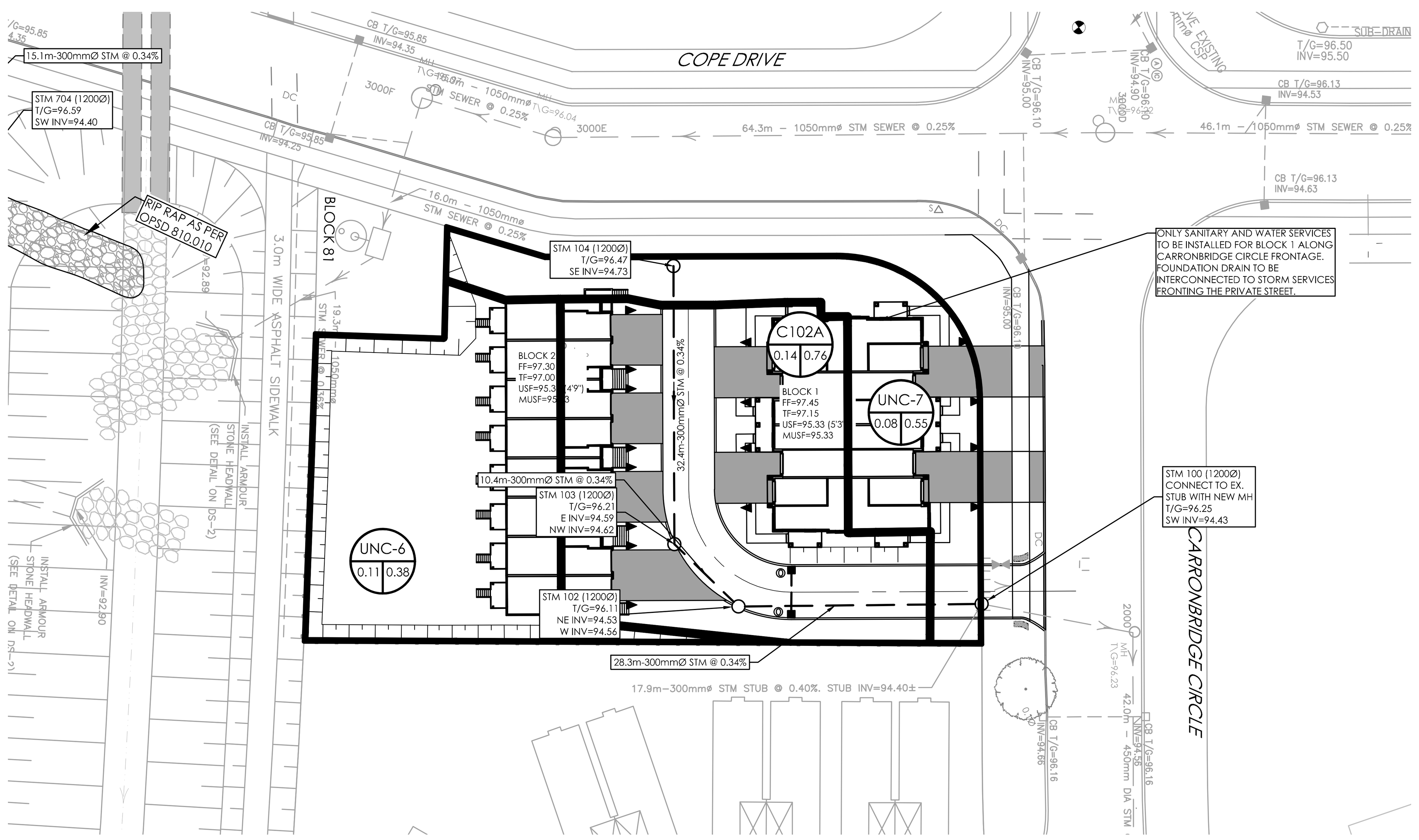
Title
COPE DRIVE UNITS
DETAIL SHEET

Project No. 160401718
Scale AS NOTED
Drawing No. DS-1
Sheet 4 of 6
Revision 1

D07-12-15-0163

17158

ORIGINAL SHEET - ARCH D



SCHEDULE OF INLET CONTROL DEVICES					
STRUCTURE ID	DRAINAGE AREA ID	ORIFICE SIZE/TYPE	ORIFICE INVERT (m)	100 YEAR HEAD (m)	100 YEAR RELEASE RATE (L/s)
CB102A–1	C102A	102mm IPEX TEMPEST HF	94.70	1.51	23
CB102A–2	C102A	102mm IPEX TEMPEST HF	94.70	1.51	23
CB304A–1	C304A	95mm IPEX TEMPEST HF	95.07	1.53	22
CB304A–2	C304A	95mm IPEX TEMPEST HF	95.07	1.53	22
CB306A–1	C306A	83mm IPEX TEMPEST HF	95.10	1.51	17
CB306A–2	C306A	83mm IPEX TEMPEST HF	95.10	1.51	17
CB310A–1	C310A	83mm IPEX TEMPEST HF	95.31	1.47	16
CB310A–2	C310A	83mm IPEX TEMPEST HF	95.31	1.47	16
CB502A–1	C502A	102mm IPEX TEMPEST HF	95.10	1.50	25
CB504A–1	C504A	75mm IPEX TEMPEST HF	95.19	1.47	13
CB504A–2	C504A	75mm IPEX TEMPEST HF	95.19	1.47	13
CB506A–1	C506A	83mm IPEX TEMPEST HF	95.22	1.51	17
CB506A–2	C506A	83mm IPEX TEMPEST HF	95.22	1.51	17
CB508A–1	C508A	75mm IPEX TEMPEST HF	95.18	1.52	14
CB508A–2	C502A	83mm IPEX TEMPEST HF	95.18	1.52	17
CB512A–1	C512A	75mm IPEX TEMPEST HF	95.25	1.52	14
CB512A–2	C512A	70mm IPEX TEMPEST HF	95.25	1.52	12

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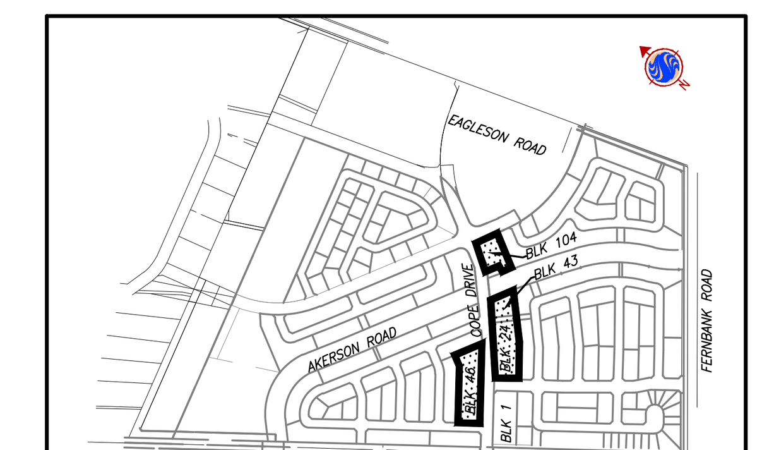
- PROPOSED STORM SEWER
- PROPOSED DRAINAGE BOUNDARY
- PROPOSED CATCHBASIN
- ST101A — STORM DRAINAGE AREA ID#
- 0.38 0.70 — C-COEFFICIENT VALUE; DRAINAGE AREA (HA)
- DIRECTION OF OVERLAND FLOW
- WATTS AREA DRAIN OR EQUIVALENT
- EXISTING STORM SEWER
- EXISTING CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- EXISTING SUBDRAIN CATCHBASIN

Notes

1. ALL PROPOSED BUILDINGS TO BE EQUIPPED WITH BACKWATER VALVES FOR FOUNDATION DRAINAGE.


LOCATION PLAN
N.T.S.

1	ISSUED FOR REVIEW	WAJ	KJK	23.06.19
Revision		By	Appd.	YY.MM.DD

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R. J. B. BRANDRICK
100570025
June 22 2023
PROVINCE OF ONTARIO

Client/Project
CAVANAGH CONSTRUCTION LTD.

TRAILS WEST

Ottawa ON Canada

Title
COPE DRIVE UNITS
STORM DRAINAGE PLAN

Project No. 160401718

Scale 1:500 0 5 15 25m

Drawing No. SD-1

Sheet 5 of 6

Revision 1

D07-12-15-0163

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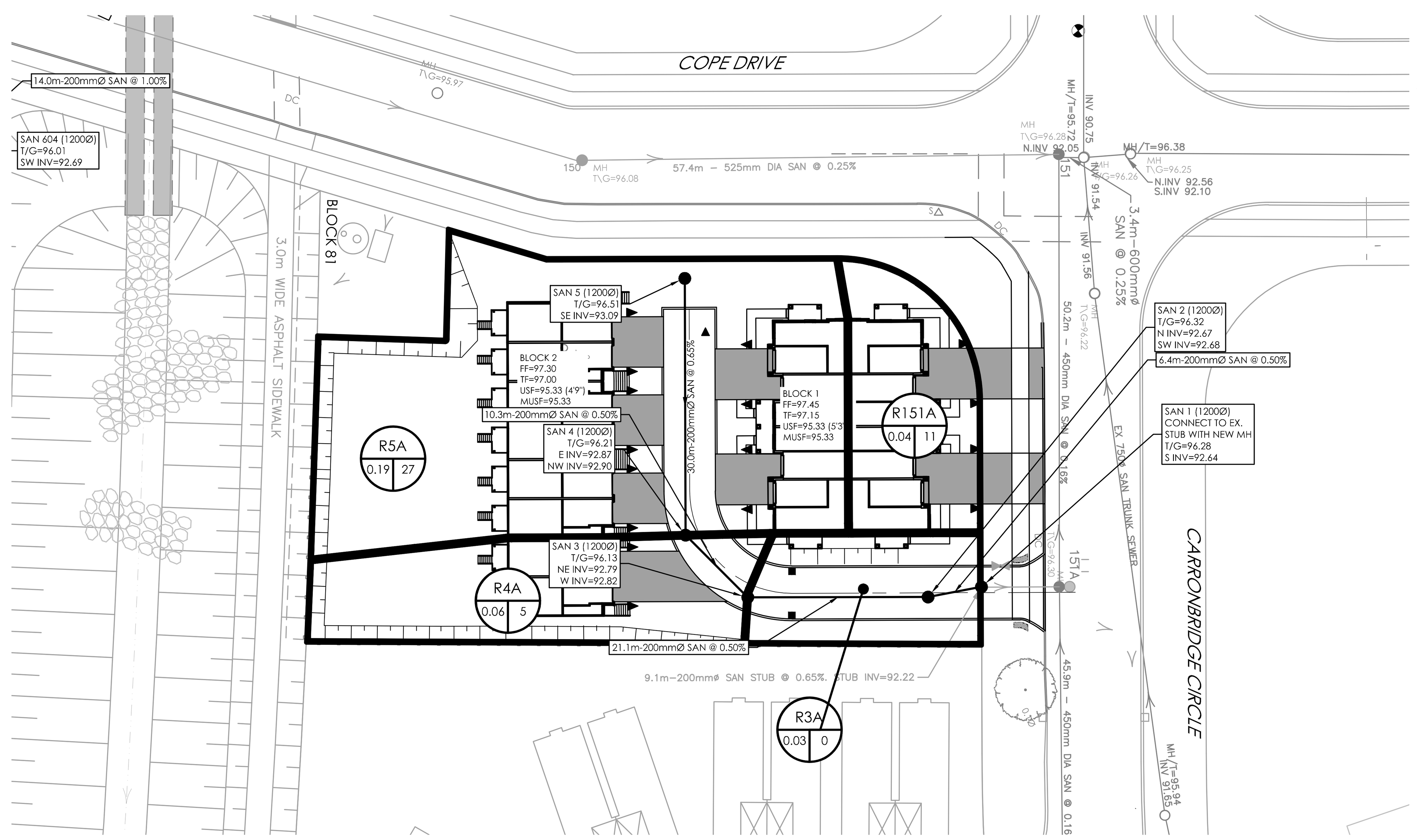

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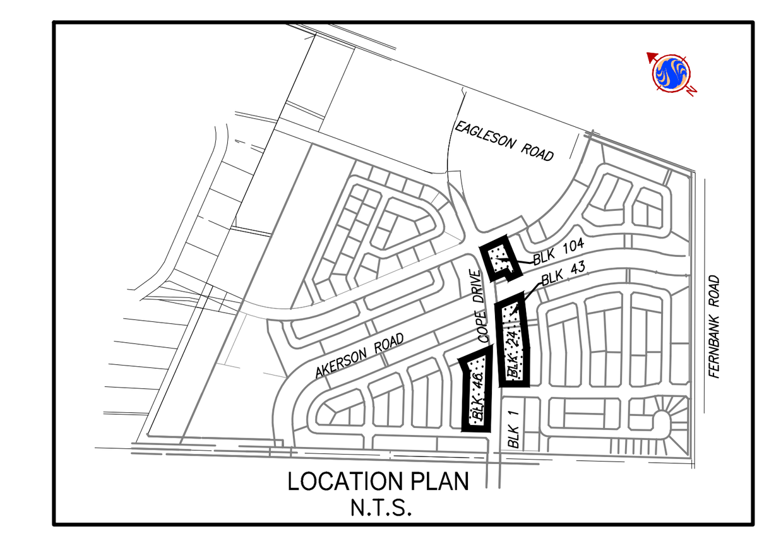
- SA1 — SANITARY DRAINAGE AREA ID#
- 34 — POPULATION
- 0.38 — SANITARY DRAINAGE AREA ha.
- SANITARY DRAINAGE AREA
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER

Notes

1. ALL PEAT AND BLAST ROCK INFORMATION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER.
2. ALL ENGINEERED FILL AND GRADE RAISES TO BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO PLACING OF MATERIAL.



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Ottawa ON Canada

Title

COPE DRIVE UNITS
SANITARY DRAINAGE PLAN

Project No. 160401718

Scale 1:500 (0 5 15 25m)

Drawing No. SA-1

Sheet 6 of 6

Revision 1

D07-12-15-0163

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