APPENDIX 10

PRELIMINARY DRAINAGE AND STORMWATER MANAGEMENT REPORT

Columbia Way Class EA

Preliminary Drainage and Stormwater Management Report

September 27, 2021

Prepared for:

TOWN OF CALEDON

September 27, 2021 RVA 195072

Arash Olia, Ph.D., P.Eng.
Acting Manager, Transportation
Town of Caledon
6311 Old Church Rd,
Caledon, ON
L7C 1J6

Attention: Arash Olia, Ph.D., P. Eng., Manager, Transportation Engineering

Re: Columbia Way Class EA
Preliminary Drainage and SWM Report

We are pleased to provide the enclosed Preliminary SWM Report for the Town of Caledon Columbia Way Class EA.

Please do not hesitate to contact the undersigned if you have any questions.

Yours very truly,

R.V. ANDERSON ASSOCIATES LIMITED

Naomi Vaset, M.Sc., P.Eng
Stormwater Management Engineer

Oliver Olberg
Manager of Hydraulic modeling

Encls.

Columbia Way Class EA

Preliminary Drainage and Stormwater Management Report

Town of Caledon

RVA 195072

September 27, 2021

Columbia Way Class EA
Preliminary Drainage and Stormwater Management Report

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 Project Description

R.V. Anderson Associates Limited (RVA) was retained by the Town of Caledon to complete a Class Environmental Assessment Study (Class EA) for Columbia Way between Highway 50 and Caledon King Townline South in Caledon, Ontario. The portion of road consists of an urban section that runs from Highway 50 to approximately 280 m east of road intersection Forest Gate Avenue and a more rural appearing road section for the remainder of the road stretch to Caledon King Townline South. The objective of the project is to urbanize the urban section of the road and to improve drainage for the rural section of the roadway along Columbia Way, i.e., adding a multi-use pathway, curb and gutter, a roundabout at intersection of Columbia Way and Mount Hope Road, curb cuts for the urban section and modifying grading along an S-curve in the rural section as well as improving several locations with erosion issues.

Columbia Way is a two-lane hard-surfaced, rural roadway that connects two arterial roads. Presently roadside ditches are used along Columbia Way to convey road runoff water between Highway 50 and Caledon King Townline South. There are six (6) existing storm outfall locations shown in Figures 2.1 to 2.8 in Appendix A.

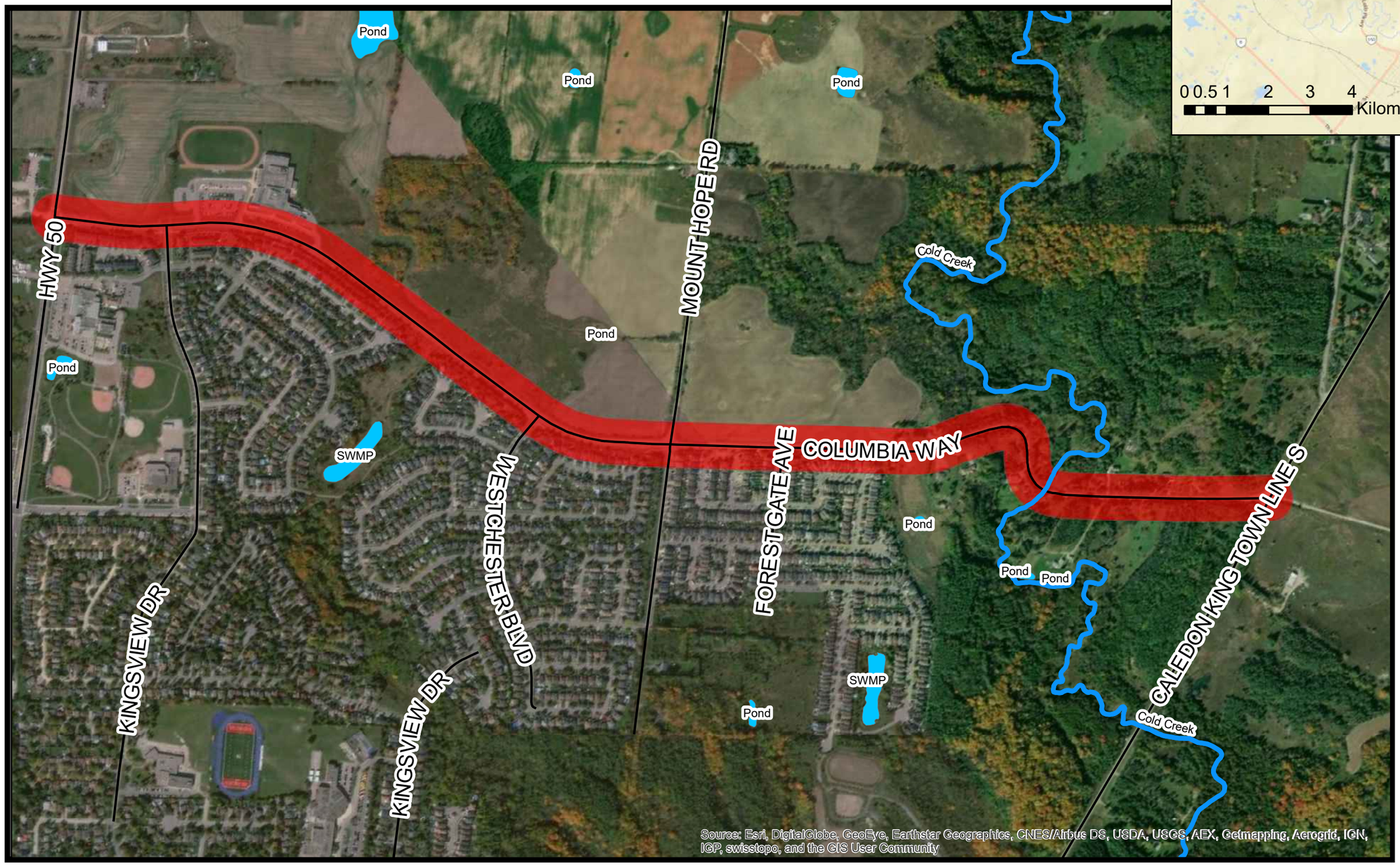
Columbia Way is located within the Toronto and Region Conservation Authority (TRCA) Humber River Watershed boundary.

The purpose of this Preliminary Stormwater Management Report (PSR) is to provide an assessment and comparison between the existing drainage conditions and proposed drainage improvements, including curb and gutter upgrades, curb cuts, trench drains, and roadside bioswales.

1.2 Project Background

The project Area (shown in Figure 1.1 below) is located along Columbia Way and stretches approximately 2370 m west and 430 m east of a bridge crossing the Cold Creek, between Highway 50 and Caledon King Townline South Road. The total length of the study corridor is approximately 2.8 km, and it is located within the Humber River Watershed. Cold Creek is a tributary to the Humber River and flows north to south within the study area. Starting at Highway 50, the current land uses are mainly rural/agricultural on the north side of the road and urban/residential along the south side of Columbia Way until an S-curve that changes the road appearance towards a more rural character. In this rural section that runs to Caledon King Townline South, the road comprises rural lands with setback properties and roadside ditches along both sides of the road.

195072 Columbia Way



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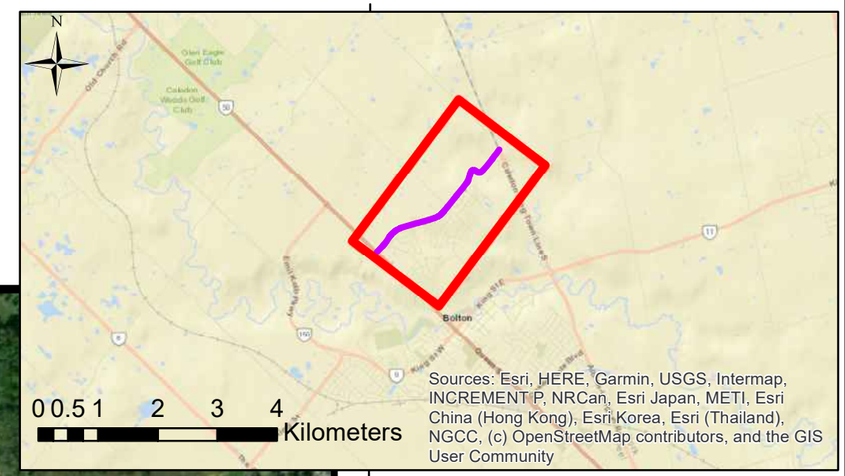

NOTES

LEGEND

- Watercourse
- Waterbody
- Roads
- Study Area

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engineering environment infrastructure

195072 Columbia Way Road Class EA

Study Area

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SCALE	1:9,000					
DATE	September 27, 2021	DRAWING NUMBER	**Figure 1**			SHEET

The following background drawings, studies, and guidance documents were obtained as part of the Stormwater Management Study and were utilized as the basis for the stormwater management design:

- Region of Peel GIS data including 2015 aerial images, contours, and drainage features
- As-built Drawings; Columbia Way, Hwy-50, and Townline
- CCTV Results for the 1200mm CSP culvert crossing Columbia Way near Highway 50
- HEC-RAS hydraulic modelling files for the Humber River Watershed
- Preliminary Geotechnical Investigation Report, Class EA Study for Columbia Way, Thurber 2020
- Columbia Way Stormwater Management Facility Class Environment Assessment Report, Town of Caledon, 2019
- Town of Caledon Stormwater Management Master Plan, MMM Group, 2016
- Guidelines for the Preparation of Stormwater Management Reports in Support of Municipal Class Environmental Assessments, Region of Peel, 2014
- Stormwater Management Criteria, Version 1.0, TRCA 2012
- Low Impact Development Stormwater Management Planning and Design Guide, Wiki Sustainable Technologies Evaluation Program (STEP 2018+)
- Development Standards, Policies & Guidelines, Town of Caledon, 2019

1.3 Purpose

The purpose of this report is to provide a stormwater management strategy that will identify and address water quantity and quality-related stormwater runoff impacts that are associated with the proposed road design and any increase in the impervious drainage area. Under proposed conditions, Columbia Way might have a slight increase in impervious areas that contributes to storm runoff in two areas. The first area change is generated by the addition of a 3m wide and 260m length multi-use pathway between the St. Michael Catholic Secondary School entrance and a trail on the north side of the roadway. The second change in catchment runoff might be generated by the addition of a roundabout at the intersection of Columbia Way and Mount Hope Road. However, as

shown in Figures 3.1 to 3.8 in Appendix B, according to the proposed road configuration, the gravel shoulder area along the road has not been entirely replaced by asphalt. In fact, the remainder gravel area will be covered by pervious surface as a result of the roadside ditches improvement. As such, the Hydrologic and Hydraulic modelling for the existing and proposed conditions have been completed to ensure that the proposed road design can neutralize the increase in imperviousness.

2.0 EXISTING SITE CONDITIONS CHARACTERIZATION

2.1 Tributary Areas, Outlets, and Drainage Patterns

Existing sub-catchments on Columbia Way were delineated based on the information provided by the Town of Caledon, localized survey information and aerial mapping with topographic contour lines to 1 m intervals accuracy. The total contributing catchment area towards Columbia Way and including Columbia Way is 14.40 ha with a split of 71% pervious and 29% impervious area.

2.1.1 Outlet 1 (1.2 m CSP culvert):

As shown in Figure 2.1 in Appendix A, Road and External Areas Drainage from the school entrance at station 10+380 toward Highway 50 are captured through the existing north-roadside ditches and conveyed through a 1200mm diameter CSP culvert that crosses Columbia Way to the south side and further curves and connects to a 915x1000mm box culvert at the south side of the Columbia Way, East of Highway 50. Figure 2.1 shows the Maintenance hole location where the CSP culvert transitions into the concrete box culvert profile and from there crosses Highway 50 and discharges the stormwater at the shown Outlet 1 location. This connectivity was investigated with CCTV surveys undertaken in December 2020 since older As-built drawings showed an outfall location for the 1200 mm diameter CSP culvert that could not be located on-site. It is noteworthy that a brief condition assessment from RVA's site visit provided the following results:

The CCTV survey shows a general issue with the corroded base of the CSP culvert-typically between 5 and 7 O'clock. At 28 m distance from the inlet, there is a deformation (approximately 10%) with one of the sidewalls bent inside. This is not severe so that it could be relined. The CSP culvert that originally only crossed Columbia Way must have been extended at a later stage than the As-built drawing date and now curves towards Highway 50 and crosses there as well. There is more severe base pipe corrosion at the extension point where a CSP bend is introduced (CCTV chainage 40.8 m).

Further downstream are several pipe sections that changed shape from circular to oval and this is not always mentioned in the CCTV report. The most severe deformation is at chainage 76 m where a metal section is bent inside with 40% cross-sectional deformation. This cannot be relined without prior correction. It likely needs to dig and cut intervention or some mechanical work from the inside first (i.e., Hydraulic jacking) before the pipe section can be lined to extend its useful service life.

The CCTV survey finished near a maintenance hole that is shown in Figure 2.1 as the transition maintenance hole from CSP pipe to concrete box culvert. It appears that the culvert crossing beneath Highway 50 is a rectangular concrete culvert.

It is recommended to upgrade the CSP culvert and restore its original drainage capacity and repair the CSP pipe structurally to extend its useful service life. Likely the best method would be trenchless pipe rehabilitation with some minor upfront work to correct one of the local major (40%) cross-sectional deformations. Based on Town of Caledon feedback, this corrective work will be done as a separate project outside of the Class EA study.

For the purposes of this Study, the full drainage capacity of the 1200 mm diameter CSP culvert was considered. Any sewer/ pipe rehabilitation would slightly decrease the inner pipe diameter of the 1200 mm diameter CSP pipe but at the same time would decrease the pipe roughness and provide a less carved surface ripple from the CSP section. Therefore, a similar drainage capacity of the rehabilitated pipe can be expected for this larger diameter pipe. Please refer to Appendix H for the As-built drawings and CCTV report.

2.1.2 Outlet 2 (Dry Pond):

As shown in Figure 2.2 in Appendix A, Road Drainage from the St. Michael Catholic Secondary School entrance towards the trail (Upstream of the Dry Pond, RVA road design station 10+821) is captured by the existing roadside ditches and conveyed through a 2m diameter CSP culvert into a dry pond that is located on the south side of Columbia Way, and was designed in the 1980’s and built in the early 1990s. The dry pond provides the quantity control for the Britanniwood and Wyndcliffe subdivisions on the East and West sides and 157ha of external areas to the north side of Columbia Way, including the majority of Columbia Way surface, Class Environment Assessment (except areas that drain to Outlet 1, 3, 4, 5 and 6). Refer to Appendix C for the Drainage Catchment Areas from the SWM Facility Design Report done by GHD 2019. Road runoff and external drainage starting from approximately 120 m west of Road intersection of Westchester Boulevard and Columbia Way is also captured by the roadside ditches and

driveway culverts and conveyed towards the downstream SWM facility. See Figure 2.3 and 2.4 for a catchment illustration.

2.1.3 Outlet 3 (Mt. Hope STM sewer):

Road runoff and external drainage starting from approximately 120 m east of road intersection of Westchester Boulevard and Columbia Way are captured by the roadside ditches and driveway culverts and conveyed towards the Mount Hope Road intersection. See Figure 2.4 for a catchment illustration. At the intersection (Mt. Hope Road), the flow is discharged through a 400 mm diameter CSP culvert with its inlet located on the north side of Columbia Way, into an existing Ditch Inlet Catchbasin (DICB) and conveys flows to the Mount Hope Road storm sewer system.

2.1.4 Outlet 4 (DICB):

As shown in Figure 2.5, road drainage between Forest Gate Avenue and Mount Hope Road intersections is captured by ditches and collected by an existing DICB located on the south side of Columbia Way through a 400 mm diameter CSP culvert.

2.1.5 Outlet 5 (Pond):

For the remaining sections of Columbia Way going eastwards and to the S-Curve's beginning, the road drainage is captured by the existing roadside ditches and drained through a ditch system towards a privately owned property into a private owned pond. The drainage area from north of Columbia Way including the northern ditch drainage crosses Columbia Way at road chainage 11+990 through a 450 mm diameter HDPE pipe. This road crossing was upgraded in May of 2020 from a previous 300 mm diameter pipe crossing and the pipe upgrade works were triggered by adjacent property flood complaints that are deemed to be rectified with the recent pipe crossing upgrade. Please refer to Figure 2.6 for its crossing location and illustration of the drainage path. A site visit was conducted to review the existing ditch capacity along the south side of Columbia Way, and it was assessed that the deep profile ditches have sufficient drainage capacity to convey the flows that would arrive from the 450 mm diameter pipe crossing. Conversations were also held with the pond owner about the pond usage and any potential water quality concerns. No existing concerns were raised, and the proposed road upgrades will not alter the storm runoff quantity and quality towards the pond.

2.1.6 Outlet 6 (Bridge):

Drainage from Columbia Way runoff and external areas starting at road chainage 11+995 at the beginning of the rural road section (S-curve) to the Caledon King Towline

South Road discharges into the Cold Creek at the creek crossing where the road bridge is located as can be seen in Figures 2.7 and 2.8.

2.2 Watercourse and Drainage Crossings

There are two existing watercourses crossing Columbia Way. The first crossing, Cold Creek is conveyed beneath Columbia Way through an existing concrete rigid frame bridge (outlet 6), and the second crossing, a tributary to Cold Creek is conveyed through an existing 2000mm diameter CSP culvert (Outlet 2). The HEC-RAS hydraulic modelling files, obtained from TRCA, were used to determine the hydraulic capacity of the crossings.

2.2.1 First Crossing

The engineered HEC-RAS model shows that the existing bridge (with a 10.86m span) can convey the 2-year to 500-year storm events without flow overtopping the roadway. However, the Regional Flood event will overtop the road, but the road height and valley capacity are safe enough to prevent any spill over the adjacent lands. It should also be noted that the replacement option was evaluated for the bridge as part of the lifecycle cost estimate analysis, but in the end, the rehabilitation alternative for the bridge has been recommended.

2.2.2 Second Crossing

The 2m diameter CSP culvert has been assessed by using the TRCA provided estimated model. The HEC-RAS model geometry and flow data have been updated and culvert structure added into the model, using the provided contour mapping, As-built drawing, and flow data. The hydraulic modelling results show that the existing 2m diameter CSP culvert can convey all storm events (from 2-year to 100-years design storm), including the Regional flood event, without surcharging and overtopping the roadway. Please refer to Appendix D for the HEC-RAS modelling results. Detailed information for both crossings, the existing bridge, and the CSP culvert can be found in Table 2.1.

Table 2.1: Existing Watercourse Crossing Information for Columbia Way

Crossing Number	Station	Material and Shape	Existing Diameter/ Dimensions	Length (m)	U/S Obv. (m)	U/S Edge of Travelled Lane (m)	D/S Inv. (m)	100 year Storm Event Water Levels (m)	Regional Storm Event Water Levels (m)
Bridge	12+355	Concrete Rigid Frame	10.86m Span	8	227.20	228.31	224.34	225.80	229.03
Culvert	10+850	Corrugated Steel Pipe	2m dia.	60	255.34	257.84	252.6	254.54	256.06

3.0 STORMWATER OBJECTIVES

3.1 Water Quantity and Flood Control

The objective of stormwater management for the improvements of Columbia Way is to develop a plan that will address the following:

- Control post-development peak flows to pre-development levels.
  - The proposed road design will not increase the post-development flow levels; as such, there will be no need to present any mitigation measures. Based on the pre-and post-development modelling results, the increase in peak flow resulting from the multi-use pathway and roundabout addition is almost neutralized by eliminating the gravel-surfaced shoulders.
- Ensure no flooding to downstream properties and/or infrastructure.
  - Under proposed conditions, the existing roadside ditches are proposed to be kept as drainage conveyance features. They will be used as a minor and major system to control any flooding issues.
  - There will be a slight decrease in peak flow levels (for all 2-100-year storm events) under proposed conditions at the current outlet locations.

3.2 Water Quality, Erosion, and Sediment Control

As per the TRCA's Stormwater Management Criteria 2012, and LID Design Guideline (STEP,2018+), the quality and erosion controls are described below:

- Quality Control – Level 1 Enhanced (80% TSS removal)
  - Although there is a slight decrease in the overall impervious cover under post-development conditions compared to pre, to provide better quality and erosion control and meet the TRCA SWM criteria, the following approach is recommended; the original roadside ditches will be kept/relocated (to be placed beside the road), improved into bioswales, and used to enhance water quality by treating the first flush off the site for the most frequent storm events throughout the entire section of the road. In addition, pre-treatment measures like vegetated filter strips are recommended at the curb cut inlets to provide further treatment.

3.3 Water Balance

- Minimum post-development recharge of the first 5 mm for any precipitation event
  - Since the proposed road configuration includes more pervious cover compared to the pre-development conditions, and it's due to widening being proposed as paved shoulder over only portion of predominantly existing gravel shoulders and the remainder gravel area will be replaced by pervious surface as a result of the roadside ditches (swales) improvement. Therefore no specific water balance targets are needed. Additionally, the proposed roadside bioswales will promote infiltration along the entire section of the road.

4.0 FUTURE DRAINAGE CONDITIONS

4.1 Drainage Patterns

Please refer to Figures 3.1 to 3.8 in Appendix B.

Under proposed conditions, Columbia Way will be urbanized between Highway 50 and the beginning of the S-Curve (rural section, station 11+995). Semi-mountable concrete curbs, narrow gutters, and intermittent curb cuts to provide surface runoff outlets into the Bioswales will be provided for all the above-mentioned areas. The existing sidewalks will be turned into the Multi-Use Pathways (MUP) and moved further back from the roadway. Road sections that had the current sidewalk close to the road will see the MUP moved

away to the far side of the road, and its location will be interchanged with the existing ditch to bring more safety for pedestrians. However, the roadside ditches will need to be constructed between the road and MUPs for the mentioned sections. Additional MUP will also be added at the northside of the road between the school entrance and Trail. The proposed design's significant change happens at the Mount Hope Intersection by replacing it with a roundabout. There will be some improvements for the Columbia Way's rural section as well, including grading enhancements for the S-Curve area. The remainder of the rural section will be kept as existing conditions.

Road runoff will be conveyed along the urban section of Columbia Way through the proposed curb and gutter and roadsides ditches (bioswales) to proposed outlets, which are located at approximately the same location as existing.

5.0 HYDROLOGIC AND HYDRAULIC MODELING

5.1 Design Storm

As per table 3.1 of the TRCA SWM criteria in Appendix E, the 6 & 12 hours AES storm distribution were used in generating the peak flows for this study. According to the simulation results, 6 hours AES storm produced the highest peak flows compared to the 12 hours, as such, it has been utilized for simulation in this project.

5.2 Hydrologic Modeling

The catchment areas were delineated based on the pre-and post-development drainage pattern (shown in Figures 2 and 3 in Appendix B). In accordance with the Town’s standards, Impervious surfaces such as paved areas and gravel shoulders were assumed to have a runoff coefficient of 0.9 and 0.7, respectively. The pervious surfaces such as grass and landscaped areas were assumed to have a runoff coefficient of 0.25. According to the geotechnical investigation report done by Thurber, Dec. 2020, the soil type underneath the pavement appears to be mostly silty clay along Columbia Way, which is categorized under hydrologic soil group C with a low infiltration rate. Please refer to Appendix E for the runoff CN selection tables. It’s also noted that the shallow groundwater table was only seen near the Cold Creek bridge.

Additionally, the pre-and post-development peak flows were calculated for the project area for all design storm events (2, 5,10, 25, 50 & 100 year design storms) as per TRCA criteria (Appendix E) using the PCSWMM software. As mentioned above, the 6-hour AES storm distribution was used to determine pre-and post-development flows as recommended by TRCA SWM guideline. Detailed PCSWMM input, as well as modelling

parameters, can be found in Table 5.1 in Appendix F. The contributing areas, percent imperviousness, peak flows, and percent change at the outlet locations for both pre and post-development scenarios (for 100-year storm event) is also presented in Table 5.2 in Appendix F.

As shown in Table 5.2, there is a slight decrease in peak flow under proposed conditions compared to the pre-development, eliminating the need to use extra water quantity control tools for the project area.

5.3 Hydraulic Analysis

5.3.1 Road Crossing Minor Culverts and Roadside Ditches/Swales

A complete hydraulic analysis has been done using PCSWMM software to assess the road crossing and driveway culverts and ditches/bioswales capacity for the pre-and post-development scenarios. Under the pre-development scenario, the ditch cross-sections and driveway culvert information were taken from the survey data and modeled using the PCSWMM software. Please refer to Tables 5.3 and 5.4**,** and Figures 4.1 to 4.6 in Appendix G for the modelling summary output for 10 and 100-year design storm events. The Max/Full flow attribute is used to analyze the percent capacity of the ditches/bioswlaes and culverts.

As shown in the tables and figures mentioned above, roadside ditches and driveway culverts have enough capacity to capture and convey peak flows generated by the minor (10-year) and major (100-year) storm events, and there are no surcharging and flooding issues.

Under proposed conditions, some culverts and sections of ditches would need to be removed, relocated, or extended based on the new road design configurations. As such, the post-development model has been established to analyze the hydraulic conditions of the proposed culverts and roadside bioswales. The proposed bioswales cross-sections are trapezoidal with 1 m bottom width and (~0.9 m) depth. As shown in Tables 5.5 and 5.6**,** and Figures 5.1 to 5.6 in Appendix G**,** there are no capacity issues under proposed conditions for 10 and 100year storm events. It should be noted that the minimum size of 450 mm and 600 mm diameter has been considered for the proposed driveway and road crossing culverts, respectively. The roadside bioswales can also convey the locally required design storm (the 10-year storm) at non-erosive velocities (<1.5 m/s) with freeboard provided above the required design stormwater level.

As mentioned earlier in Section 3.2, the roadside ditches will be improved and used as the water quality measures (bioswales) to treat the road runoff during the most frequent

storm events. As per the LID design guideline, bioswales should be designed for a maximum velocity of 0.3 m/s or less for a 4 hour 25 mm Chicago storm event. As such, the model has been run to analyze the velocity limit during the mentioned storm event. Please refer to Table 5.7 in Appendix G for the model and PCSWMM summary output. As shown in the table, there are a few sections of swales that velocity exceeds the upper design limit or the grade is greater than the recommended 3% slope. In order to reduce the velocity, the use of check dams to create ditch compartments in appropriate intervals will be recommended (more details will be provided in the detailed design stage).

It should also be mentioned that an overview of the underground infrastructure was done and noticed that the watermain does not run under the base of the ditches. It will also be considered if any of the fire hydrant locations will need to be readjusted or repositioned to beside the new alignment of the MUP on the northside of Columbia Way (from Trail to School entrance) in the detailed design stage.

6.0 APPROVAL AND REVIEW REQUIREMENTS

All relevant technical agencies and stakeholders, as well as members of the public, will be able to review the drainage and stormwater management report as part of the mandatory 30 day review period.

7.0 DESIGN RECOMMENDATIONS

This stormwater management plan has been prepared in support of the proposed Columbia Way Class EA study. The study assessed the impacts of the proposed road and infrastructure upgrades on stormwater quantity, quality and erosion control measures and presents a stormwater management plan to mitigate any potential impacts in accordance with the regulatory requirements.

The recommended stormwater management plan consists of the following components:

- Under proposed conditions, there will be six outlets located at approximately the same location as existing.
- Some culverts and sections of ditches would need to be removed, relocated, or extended based on the new road design configurations.
- The existing roadside ditches will be maintained and improved under proposed conditions and will be used for the purpose of water quantity, quality, and erosion control measures for the project area.

- Semi-mountable concrete curbs, narrow gutters, and intermittent curb cuts to provide surface runoff outlets into the ditches will be provided for all the urban section of Columbia Way.
- The existing ditches' bottom width will be improved and modified to be at least 1m to be used as bioswales and provide further water quality treatment.
- Check dams will be installed within the ditch cross-sections where velocity exceeds the recommended upper limit of 0.3m/s for a 4 hour 25 mm Chicago storm event and where the longitudinal slope is greater than 3%.
- It is recommended to upgrade the 1200mm diameter CSP culvert (near Highway 50), restore its original drainage capacity, and repair the CSP pipe structurally to extend its useful service life.

The implementation of the proposed stormwater Management systems will control the site's runoff in accordance with the TRCA and Town of Caledon’s stormwater management requirements.

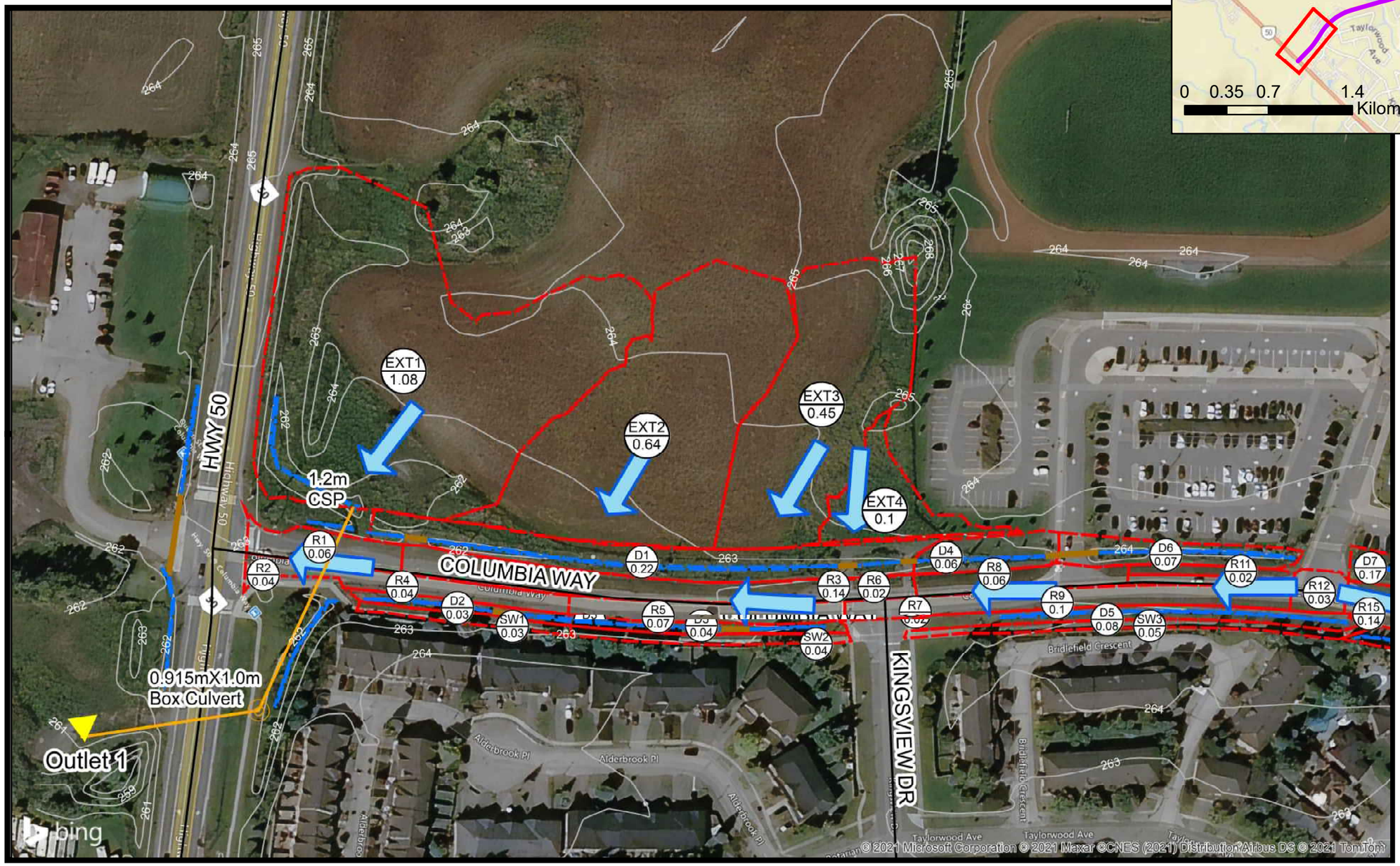
Report prepared by:

R.V. ANDERSON ASSOCIATES LIMITED

APPENDIX A

Existing Drainage Plan Figures

195072 Columbia Way



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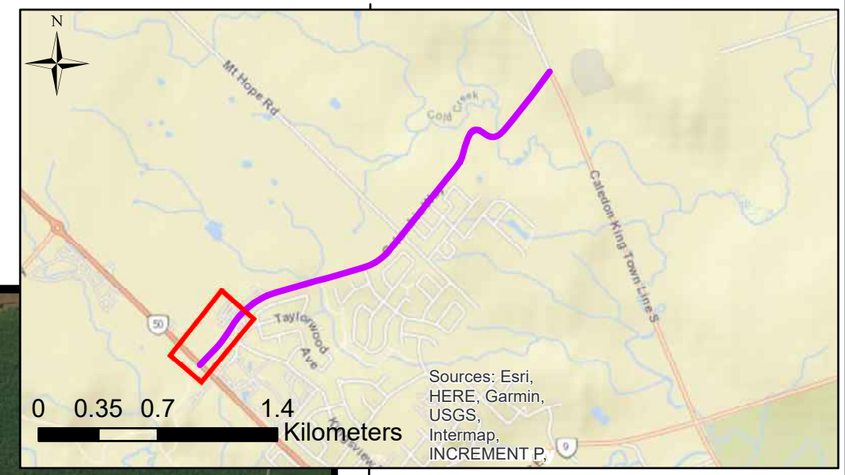

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

- EXT1 / 1.08 — Drainage Area ID / Area in ha
- Drainage Flow
- MHs
- Outlets
- RoadCulverts
- Ditch Lines
- Driveway Culverts
- Watercourse
- Roads
- Subcatchments
- Contours1m
- Waterbody

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engineering environment infrastructure

195072 Columbia Way Road Class EA

Existing Drainage Plan

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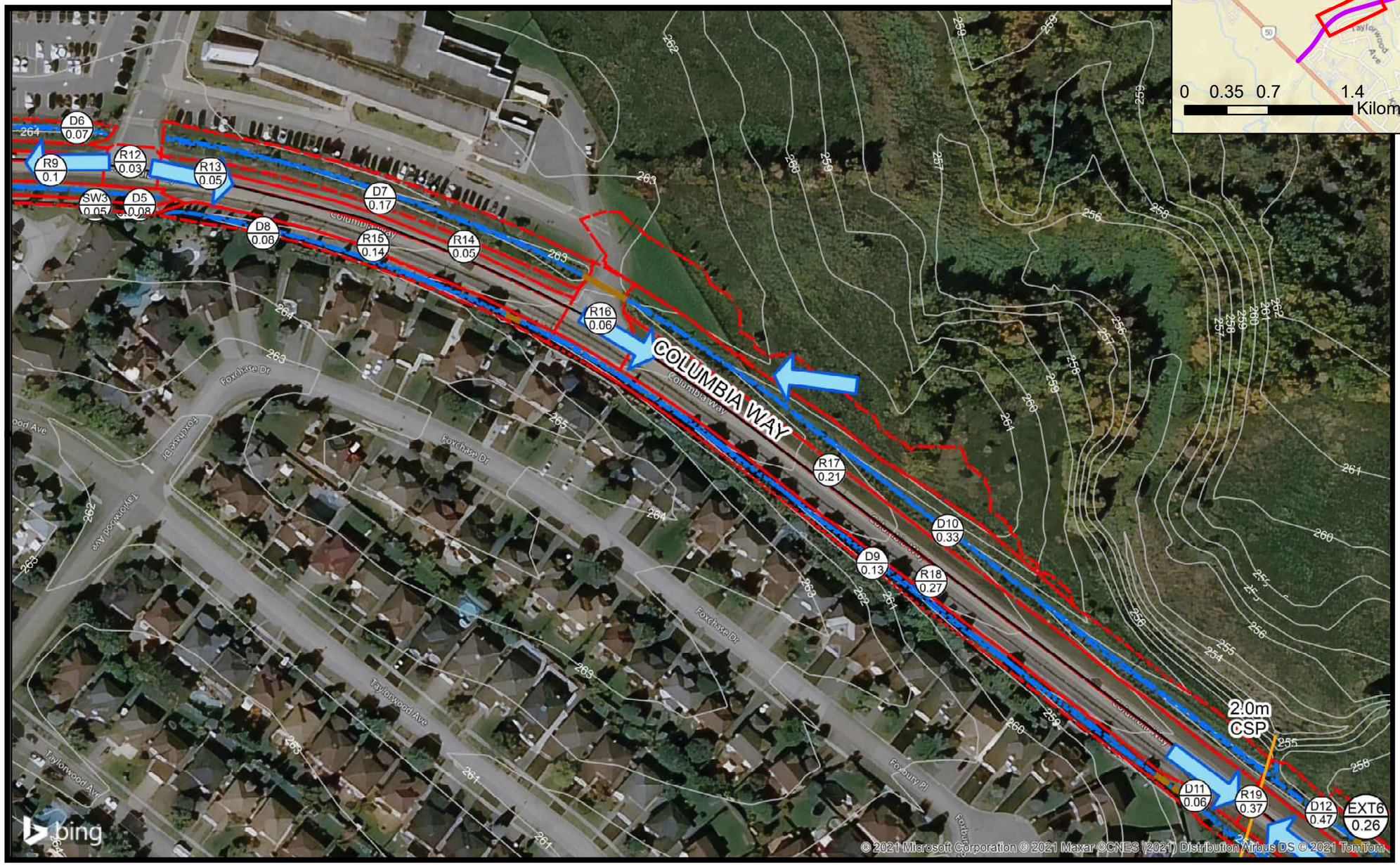
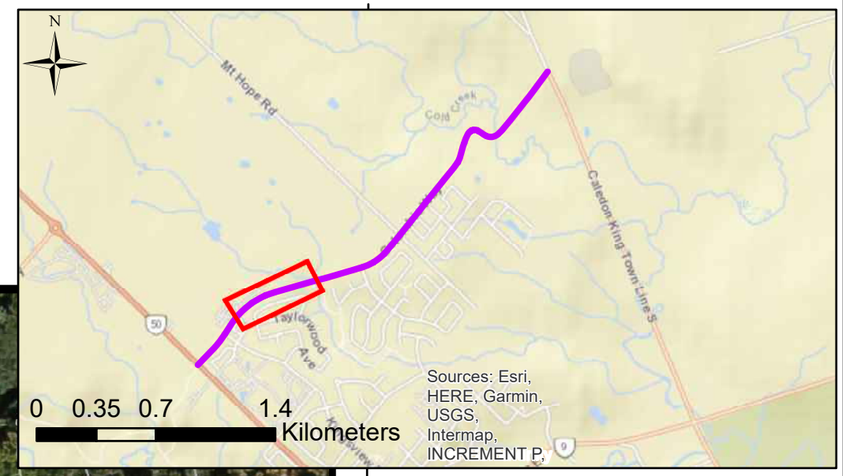
DATE	September 27, 2021	DRAWING NUMBER	**Figure 2-1**			SHEET

195072 Columbia Way





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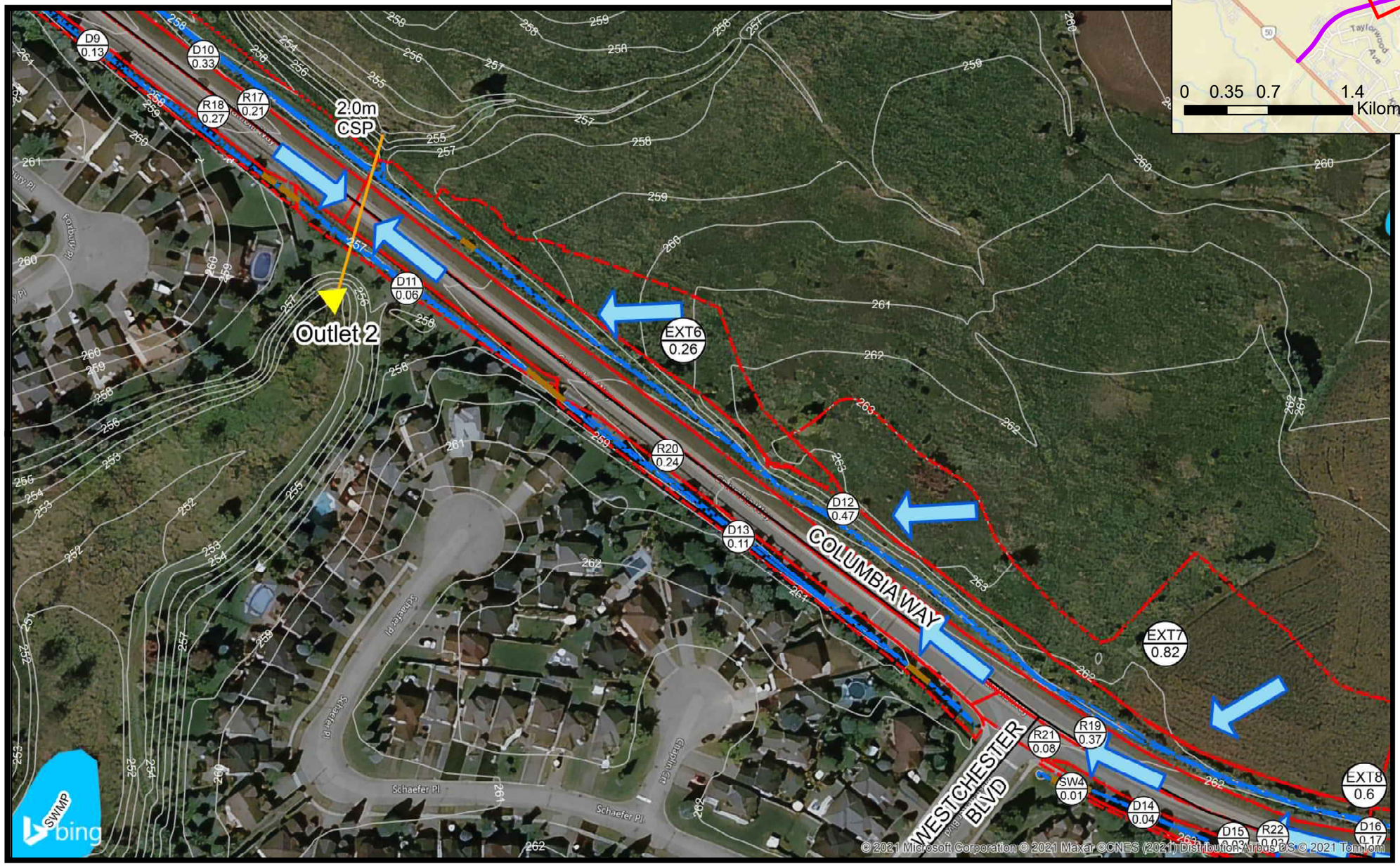
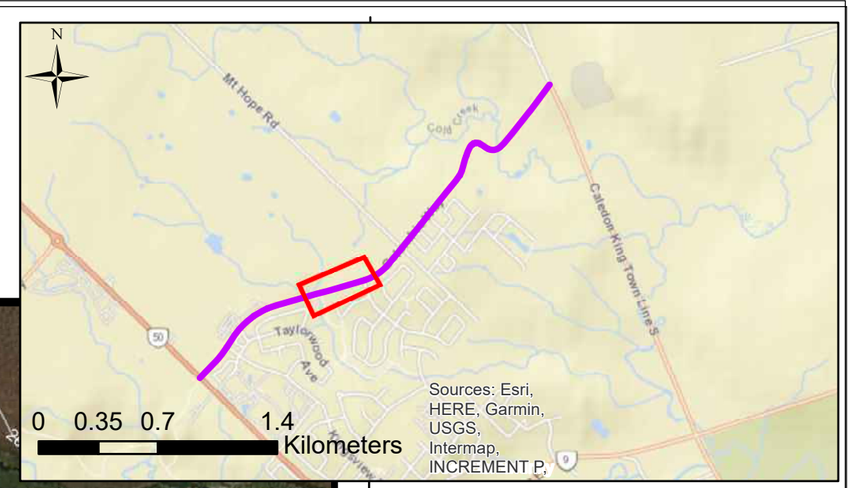
195072 Columbia Way





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LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha
Drainage Flow
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Existing Drainage Plan

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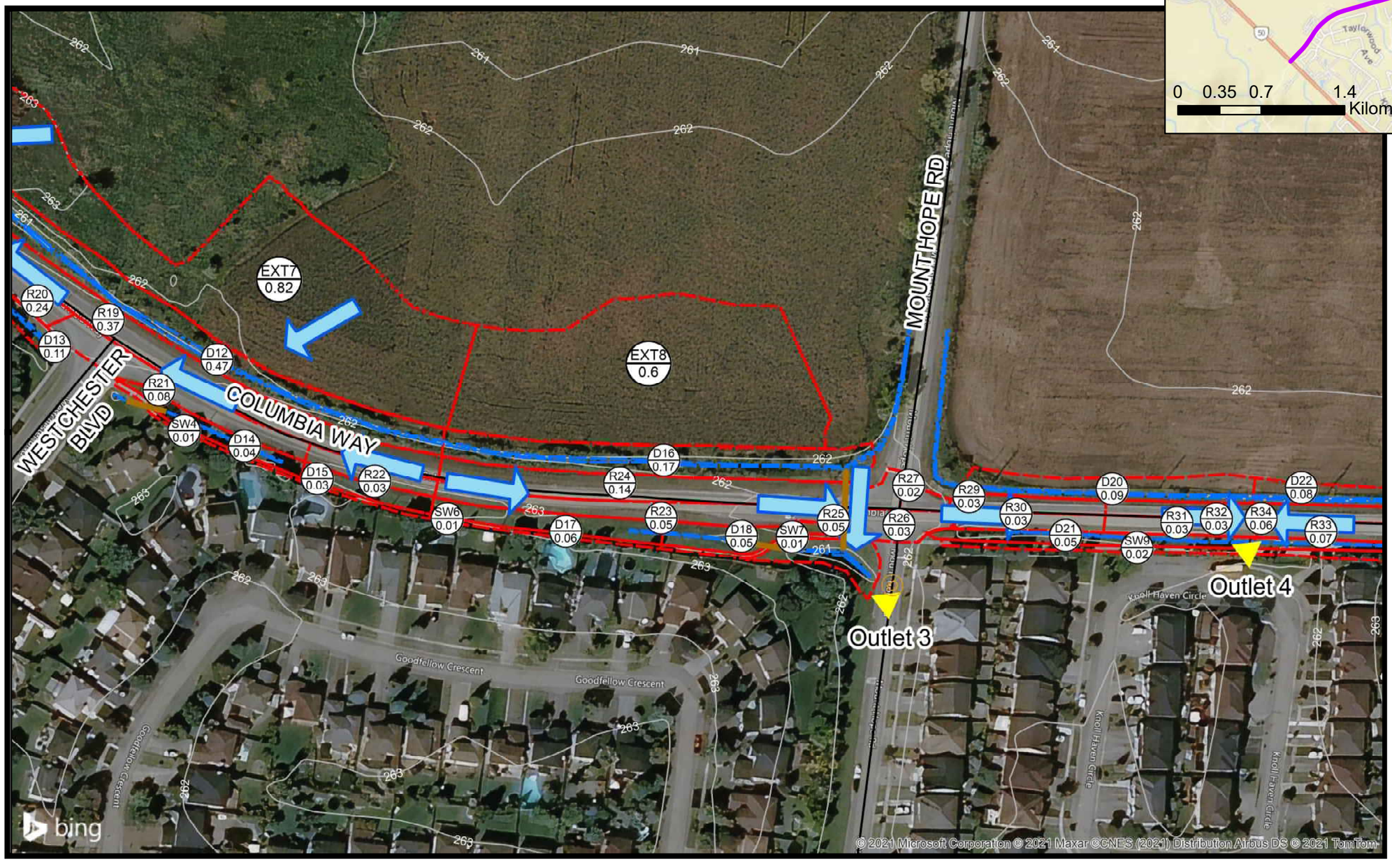
195072 Columbia Way



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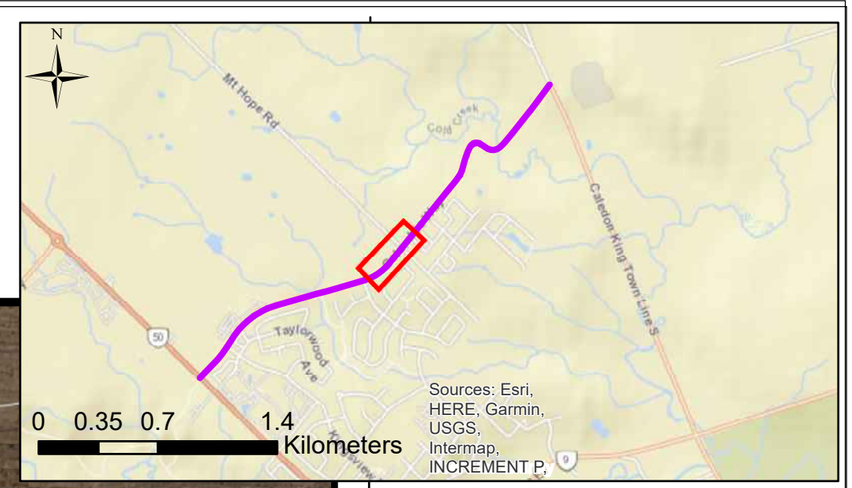


NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

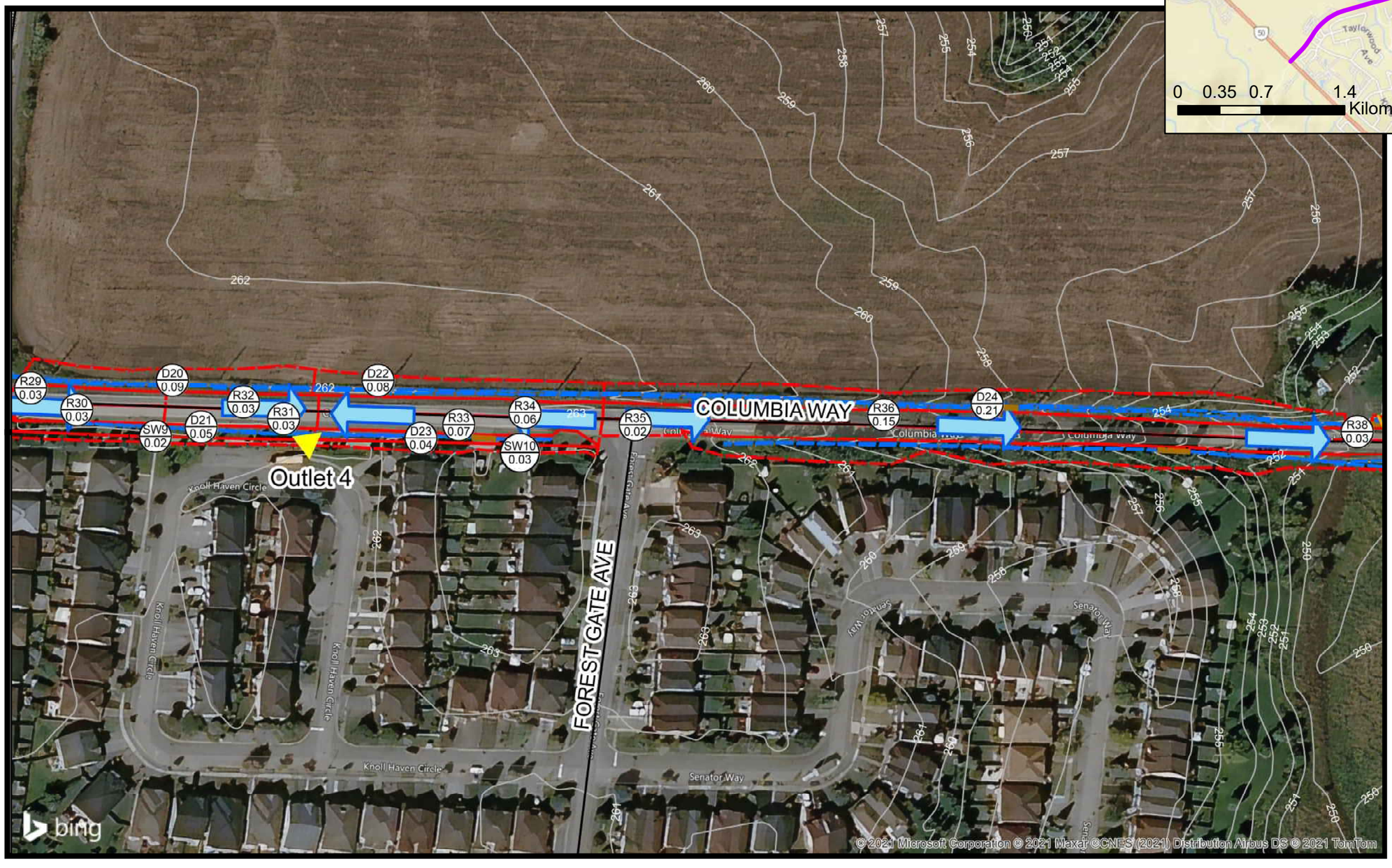
EXT1 / 1.08 — Drainage Area ID / Area in ha
Drainage Flow
D — MHs
Outlets
RoadCulverts
Ditch Lines
Driveway Culverts
Watercourse
Roads
Subcatchments
Contours1m
Waterbody

R.V.Anderson Associates Limited
engineering environment infrastructure

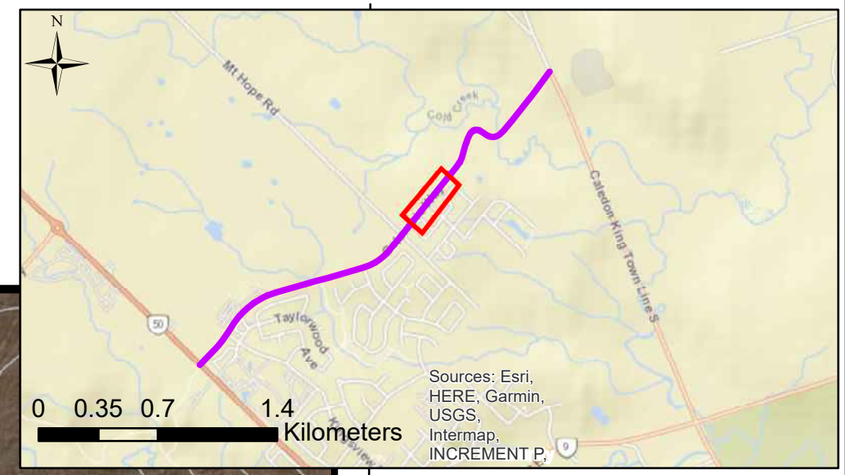
195072 Columbia Way Road Class EA
Existing Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021			DRAWING NUMBER	**Figure 2-4**		SHEET

195072 Columbia Way



0 25 50 100 150 200 Meters



NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha
Drainage Flow
D MHs
Outlets
RoadCulverts
Ditch Lines
Driveway Culverts
Watercourse
Roads
Subcatchments
Contours1m
Waterbody

R.V.Anderson Associates Limited
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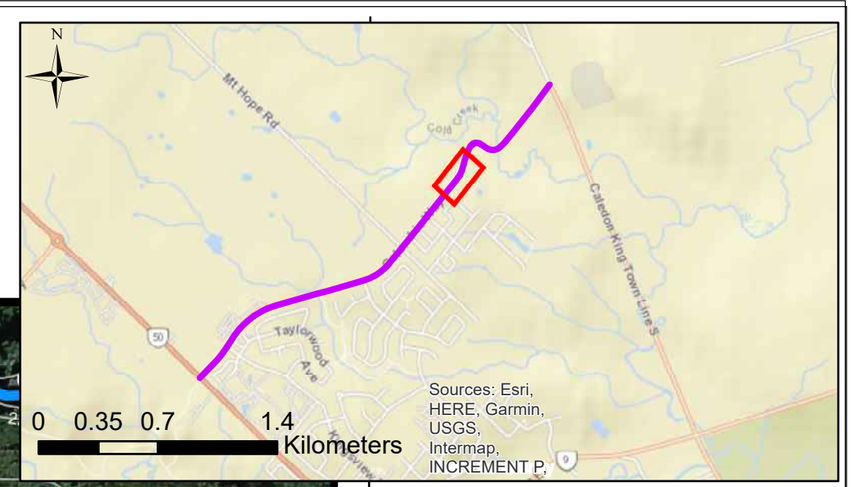
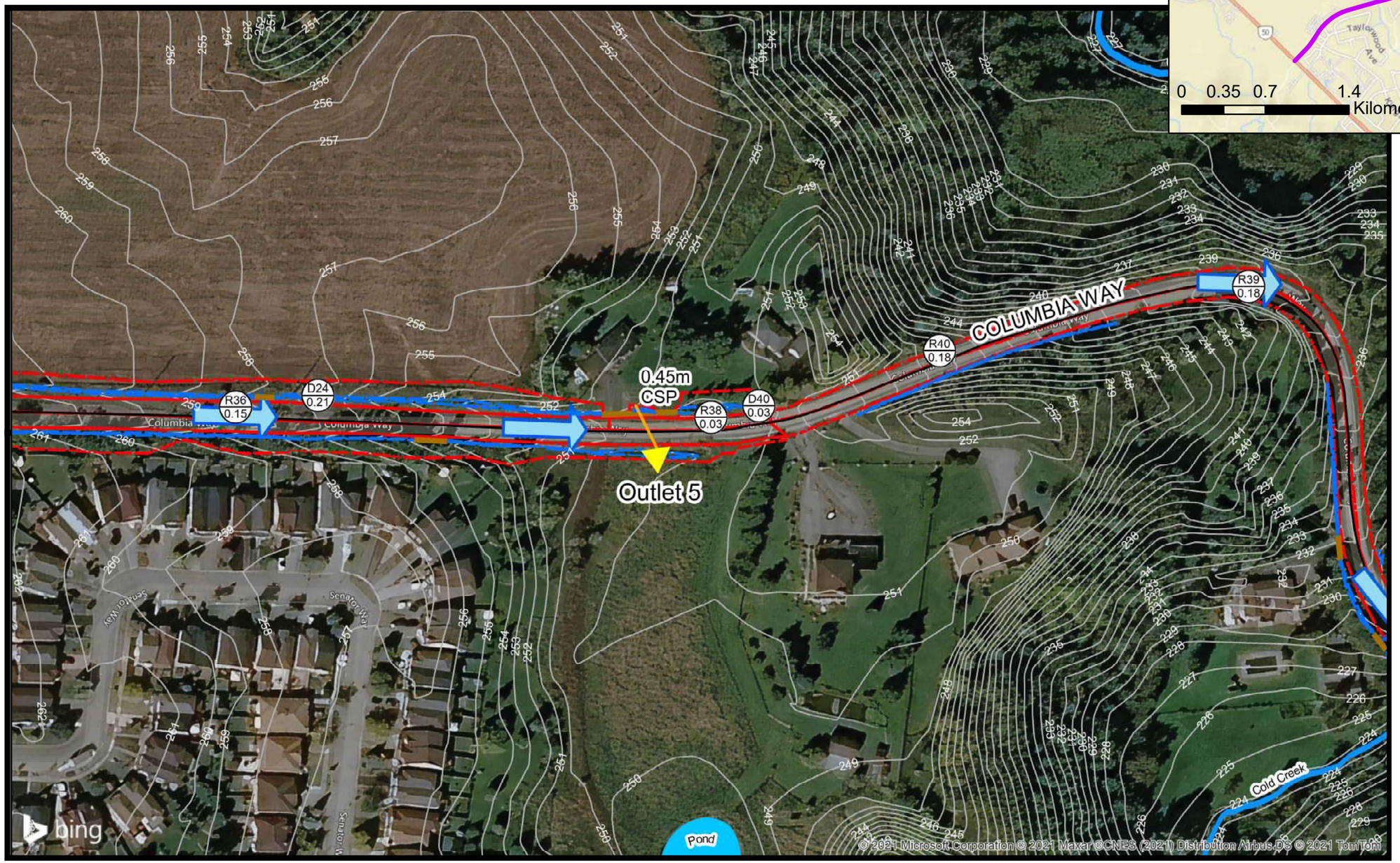
195072 Columbia Way Road Class EA
Existing Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX
SCALE	1:1,500					
DATE	September 27, 2021	DRAWING NUMBER	**Figure 2-5**			SHEET

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

- EXT1 / 1.08 — Drainage Area ID / Area in ha
- Drainage Flow
- MHs
- Outlets
- RoadCulverts
- Ditch Lines
- Driveway Culverts
- Watercourse
- Roads
- Subcatchments
- Contours1m
- Waterbody

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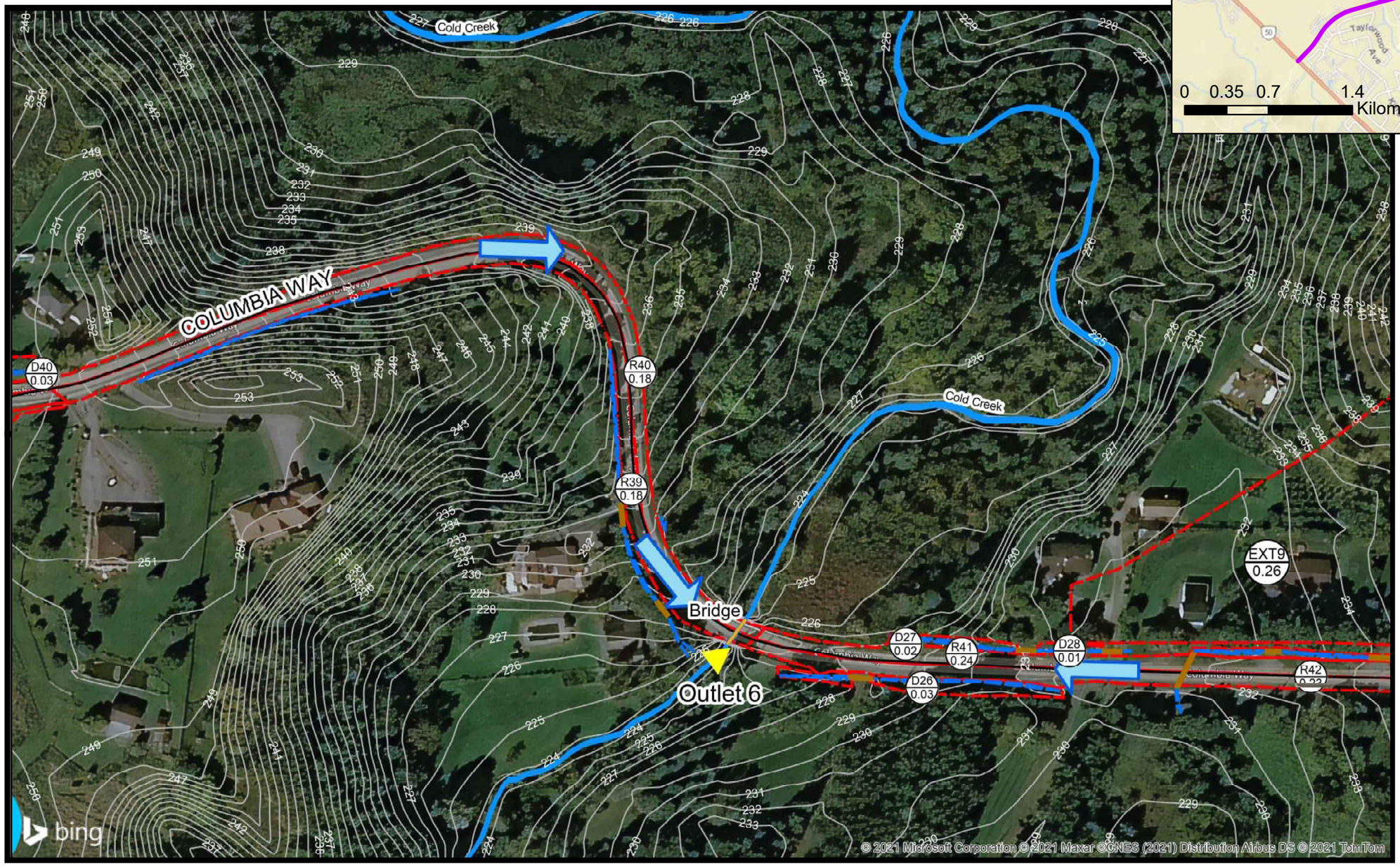
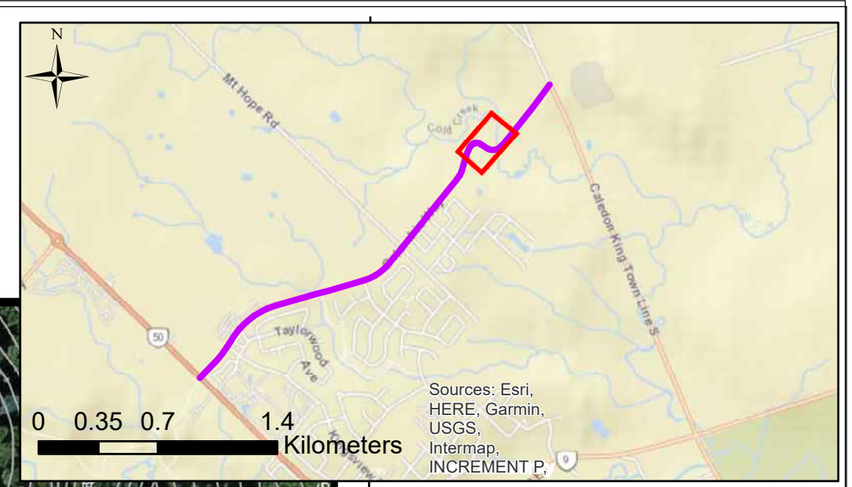
195072 Columbia Way Road Class EA

Existing Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX
SCALE	1:1,500					
DATE	September 27, 2021	DRAWING NUMBER	**Figure 2-6**			SHEET

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

- EXT1 / 1.08 — Drainage Area ID / Area in ha
- Drainage Flow
- MHs
- Outlets
- RoadCulverts
- Ditch Lines
- Driveway Culverts
- Watercourse
- Roads
- Subcatchments
- Contours1m
- Waterbody

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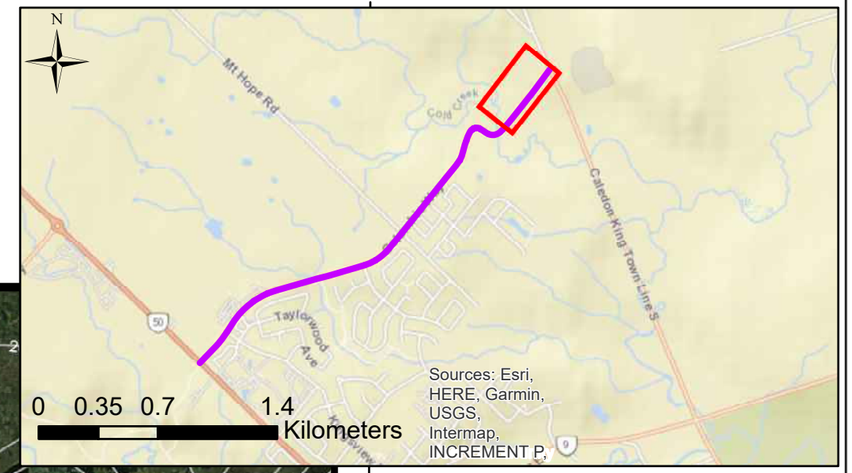
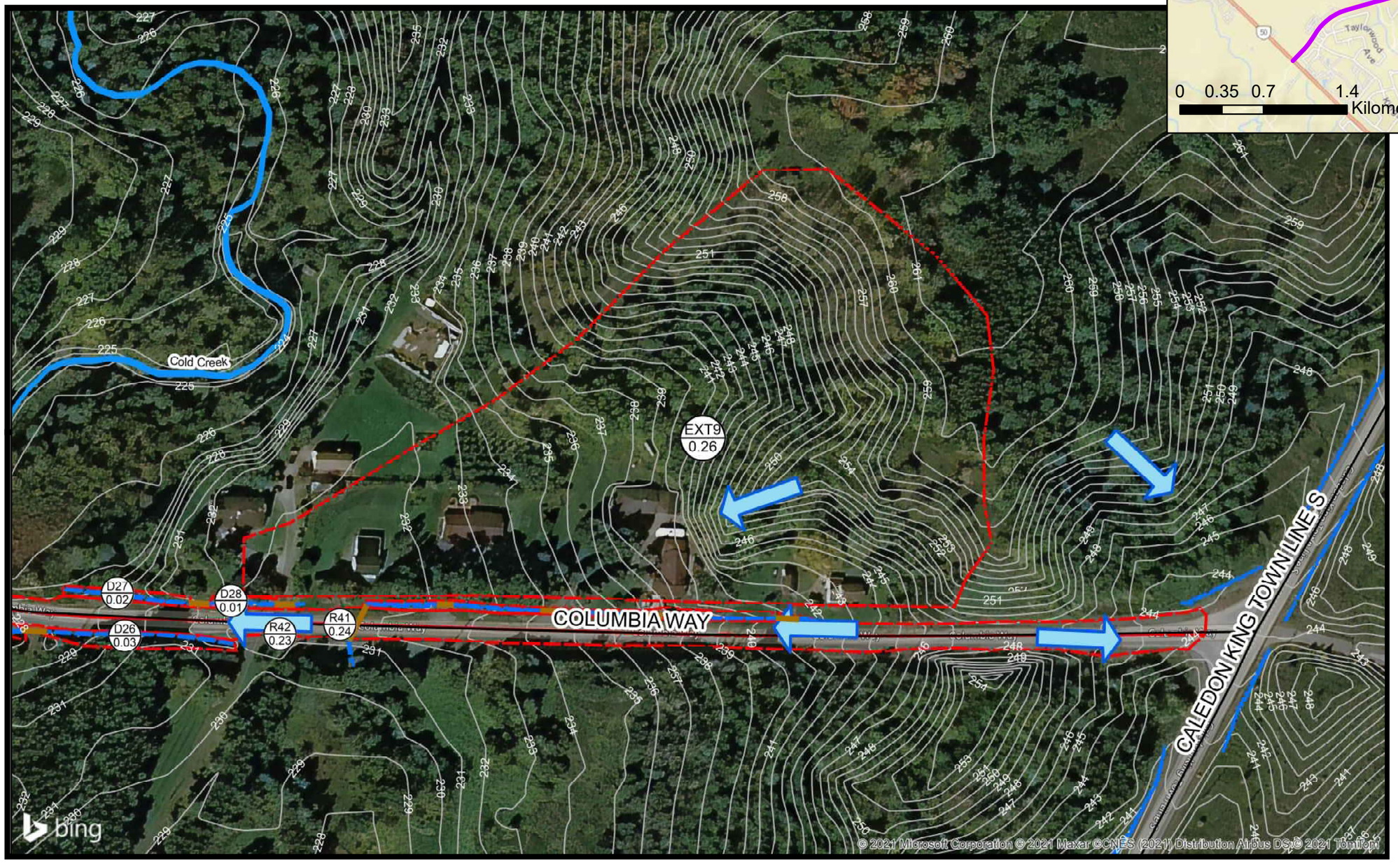
195072 Columbia Way Road Class EA

Existing Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021	DRAWING NUMBER	**Figure 2-7**				SHEET

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha
Drainage Flow
MHs
Outlets
RoadCulverts
Ditch Lines
Driveway Culverts
Watercourse
Roads
Subcatchments
Contours1m
Waterbody

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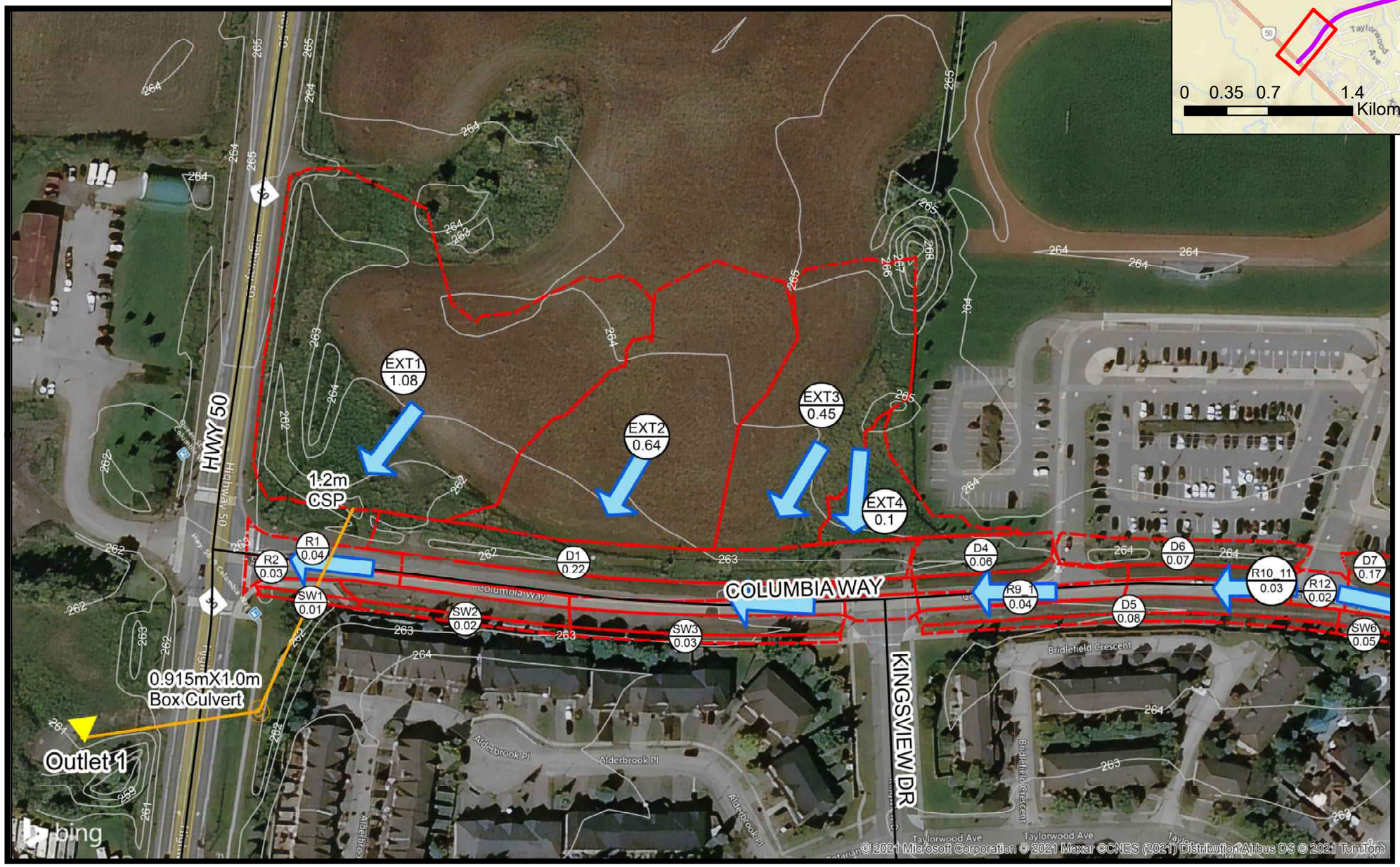
195072 Columbia Way Road Class EA
Existing Drainage Plan

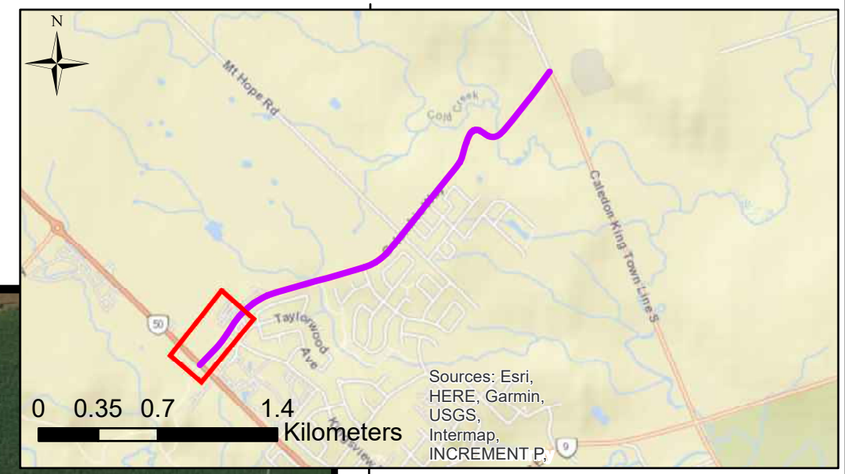
DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021	DRAWING NUMBER	**Figure 2-8**			SHEET	

APPENDIX B

Proposed Drainage Plan Figures

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

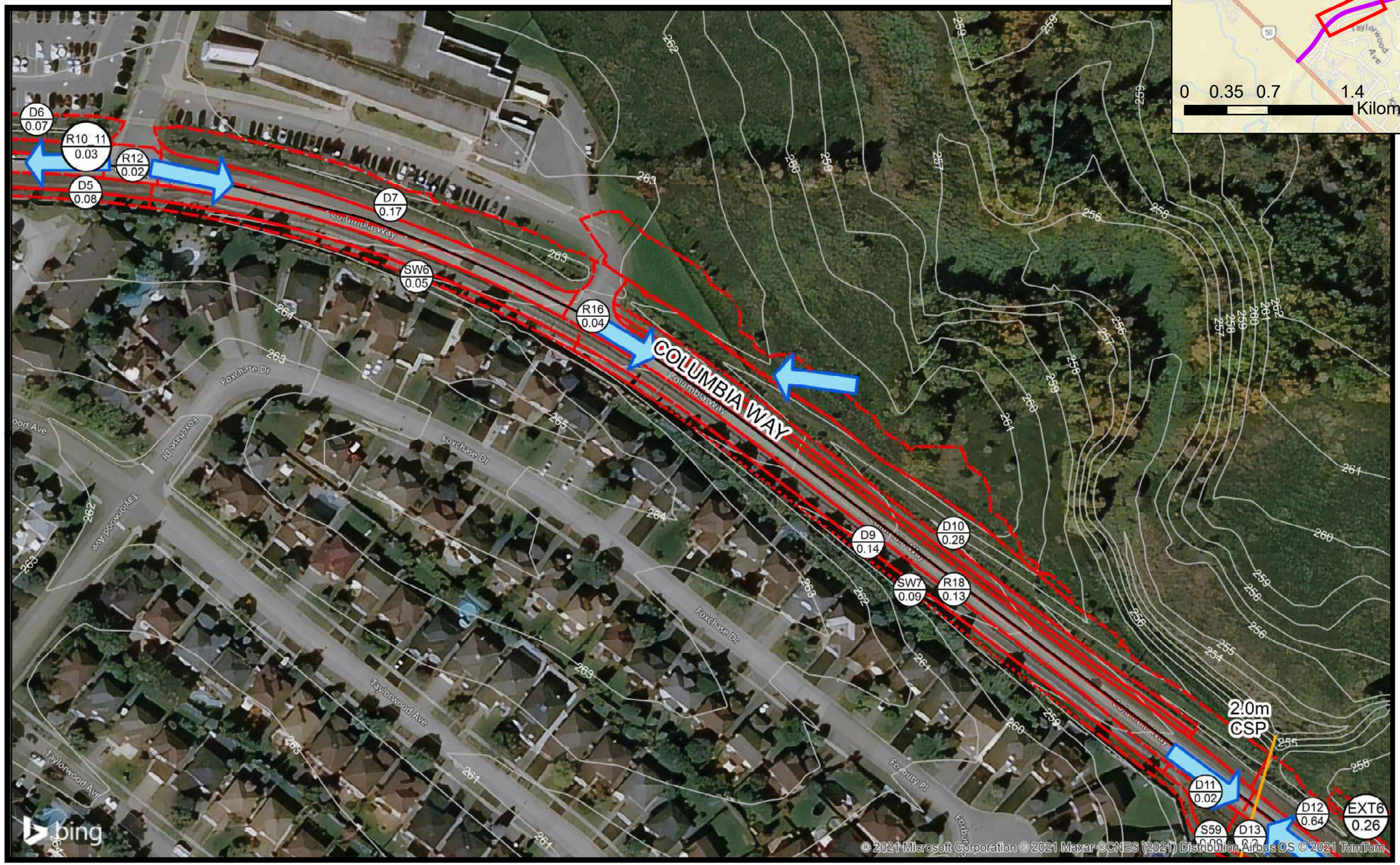
EXT1 / 1.08 — Drainage Area ID / Area in ha
Drainage Flow
MHs
Outlets
RoadCulverts
Watercourse
Roads
Proposed Subcatchments
Contours1m
Waterbody

R.V.Anderson Associates Limited
engineering environment infrastructure

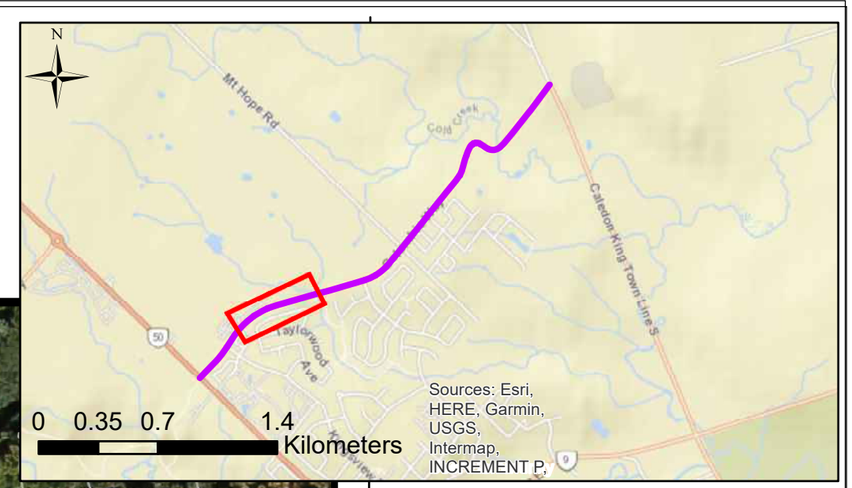
195072 Columbia Way Road Class EA
Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021		DRAWING NUMBER **Figure 3-1**				SHEET

195072 Columbia Way



0 25 50 100 150 200 Meters



NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha

Drainage Flow

MHs

Outlets

RoadCulverts

Watercourse

Roads

Proposed Subcatchments

Contours1m

Waterbody

R.V.Anderson Associates Limited
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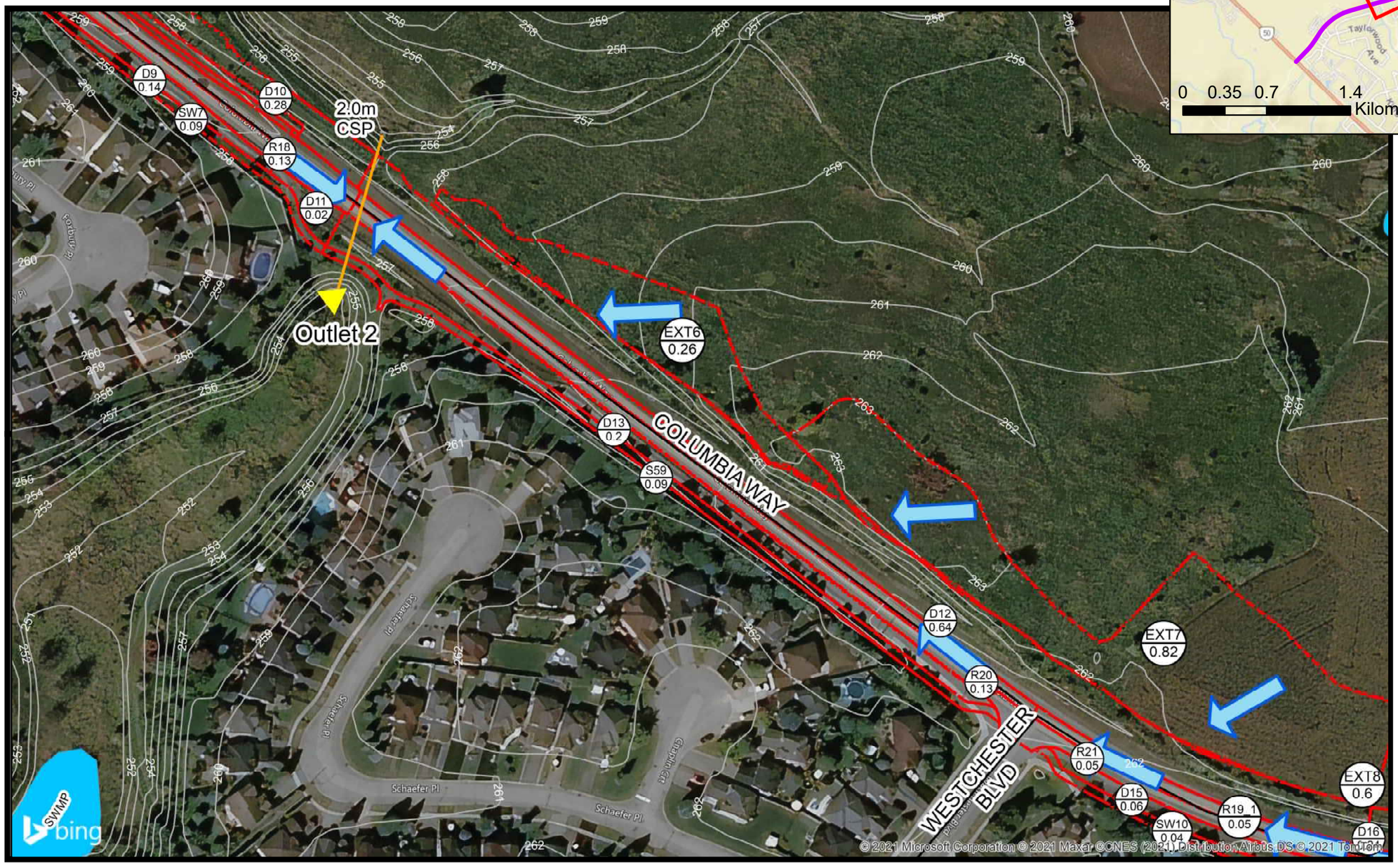
195072 Columbia Way Road Class EA

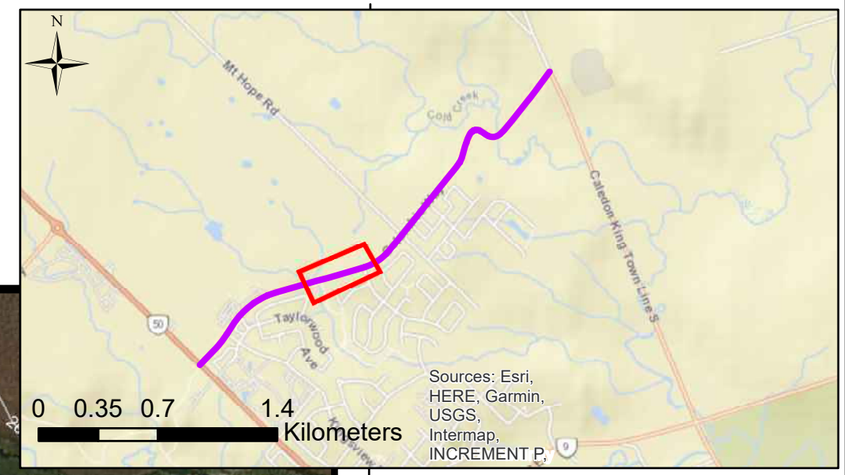
Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No.	XXX
SCALE	1:1,500						
DATE	September 27, 2021	DRAWING NUMBER	**Figure 3-2**			SHEET	

195072 Columbia Way



0 25 50 100 150 200 Meters



NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha

Drainage Flow

D — MHs

Outlets

RoadCulverts

Watercourse

Roads

Proposed Subcatchments

Contours1m

Waterbody

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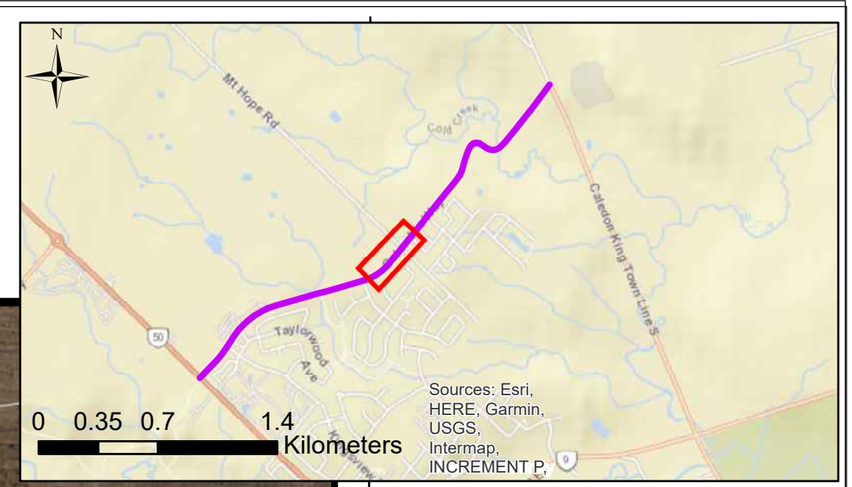
195072 Columbia Way Road Class EA

Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX		
SCALE	1:1,500							
DATE	September 27, 2021			DRAWING NUMBER	**Figure 3-3**		SHEET	

195072 Columbia Way

0 25 50 100 150 200 Meters



NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha

Drainage Flow

MHs

Outlets

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Watercourse

Roads

Proposed Subcatchments

Contours1m

Waterbody

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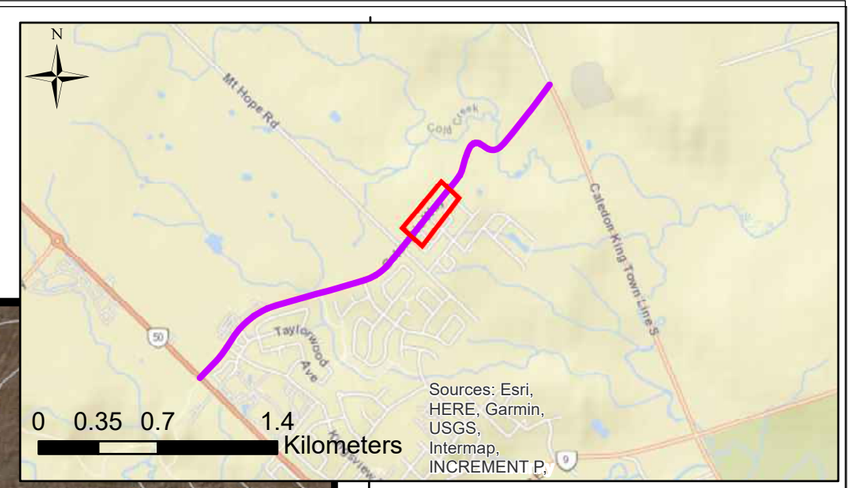
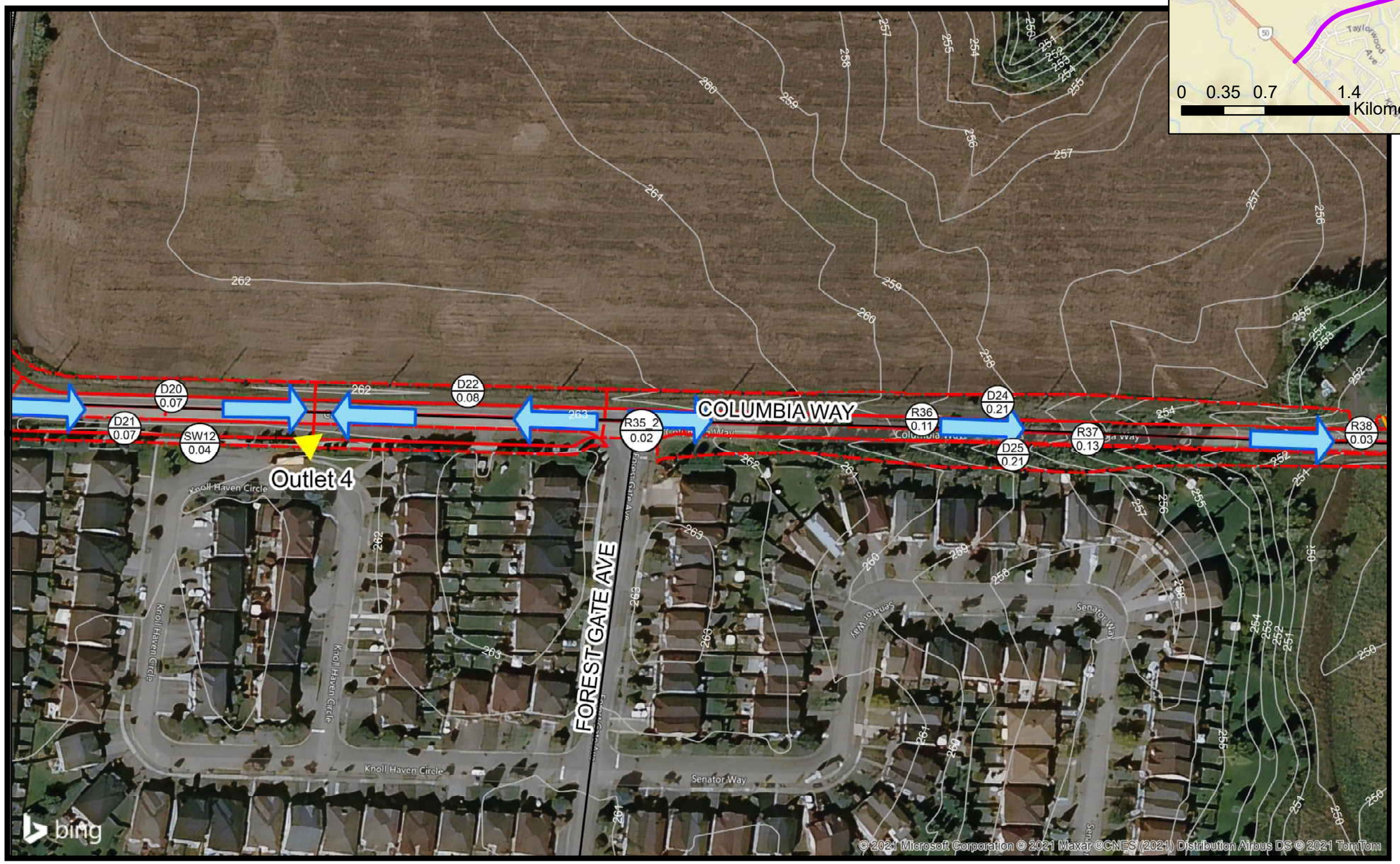
195072 Columbia Way Road Class EA
Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021	DRAWING NUMBER	**Figure 3-4**			SHEET	

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
SW = Sidewalk, 0.90

LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha

Drainage Flow

MHs

Outlets

RoadCulverts

Watercourse

Roads

Proposed Subcatchments

Contours1m

Waterbody

R.V.Anderson Associates Limited
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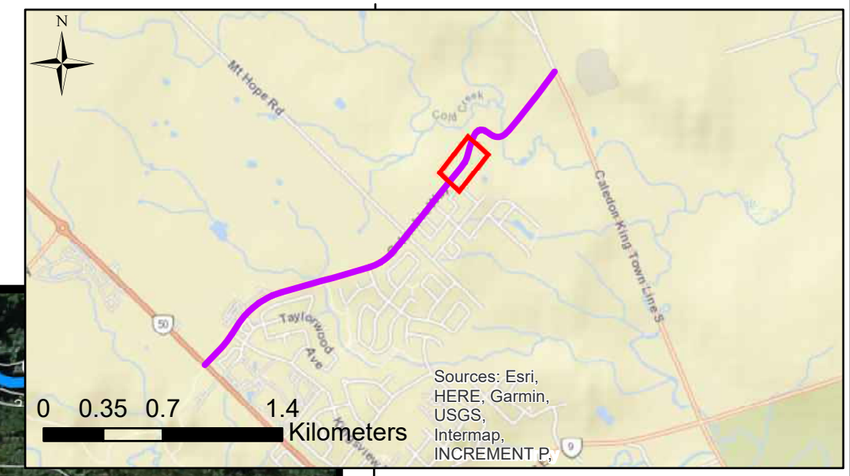
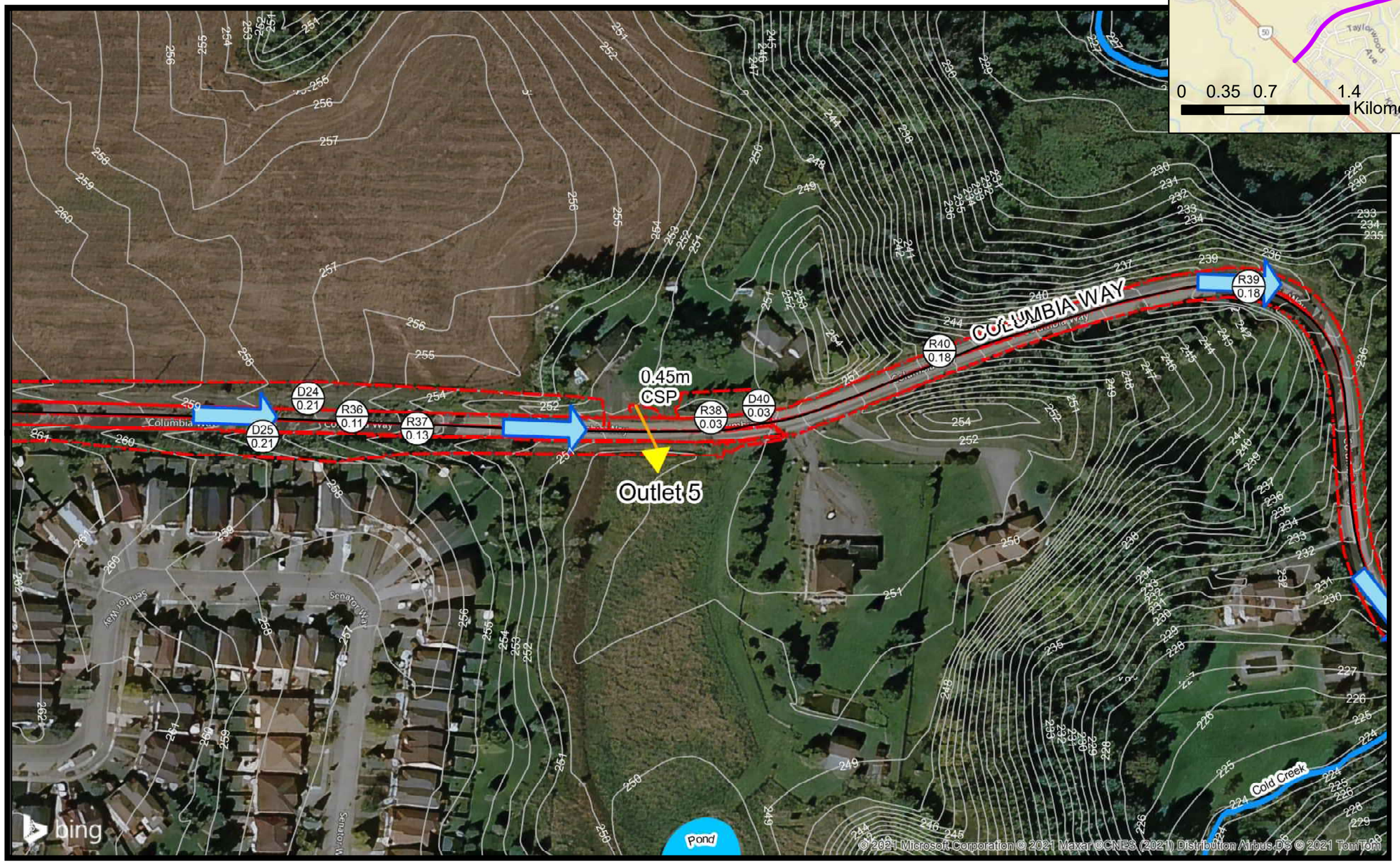
195072 Columbia Way Road Class EA

Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021	DRAWING NUMBER	Figure 3-5			SHEET	

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

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LEGEND

- EXT1 / 1.08 — Drainage Area ID / Area in ha
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- MHs
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- RoadCulverts
- Watercourse
- Roads
- Proposed Subcatchments
- Contours1m
- Waterbody

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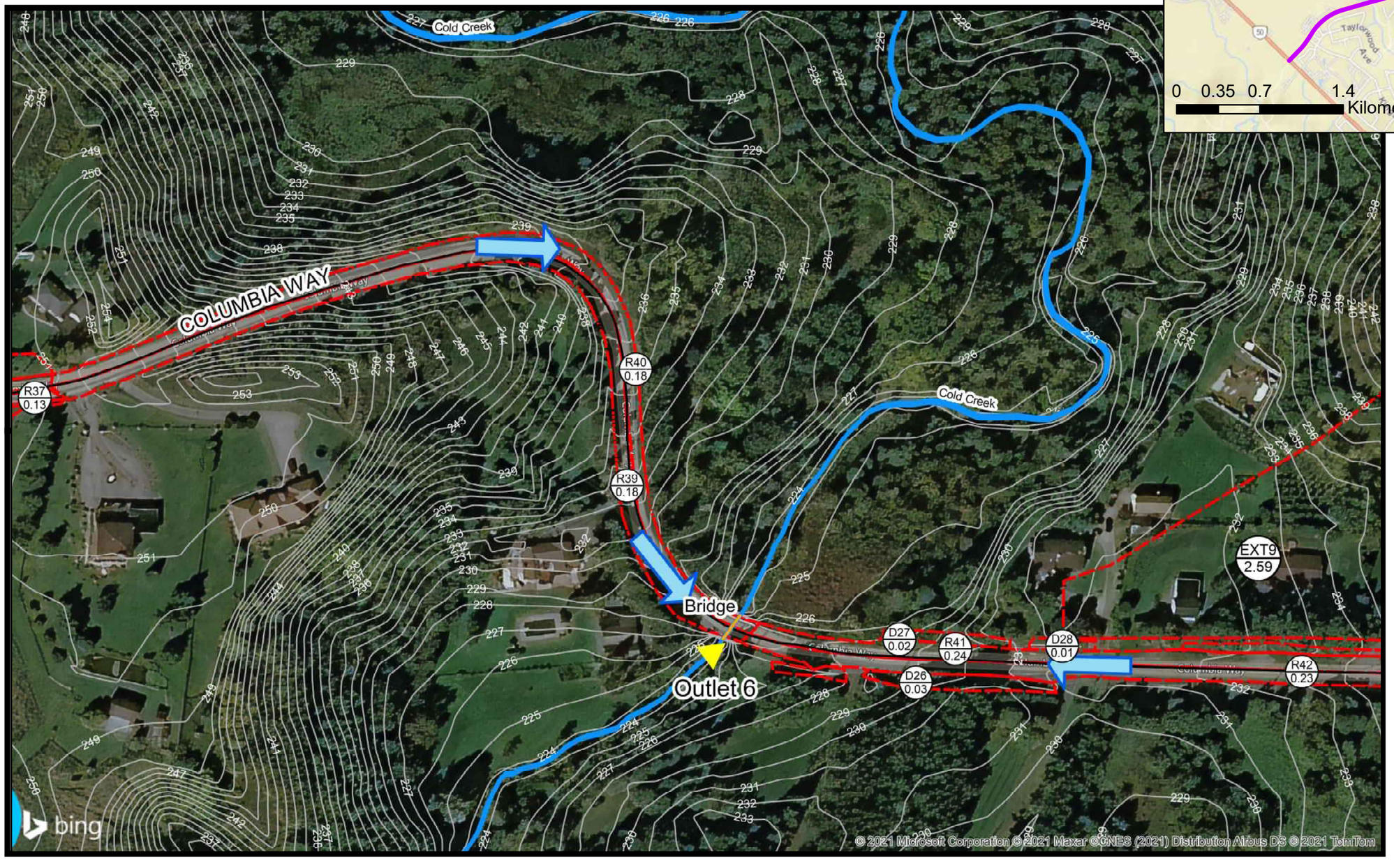
195072 Columbia Way Road Class EA

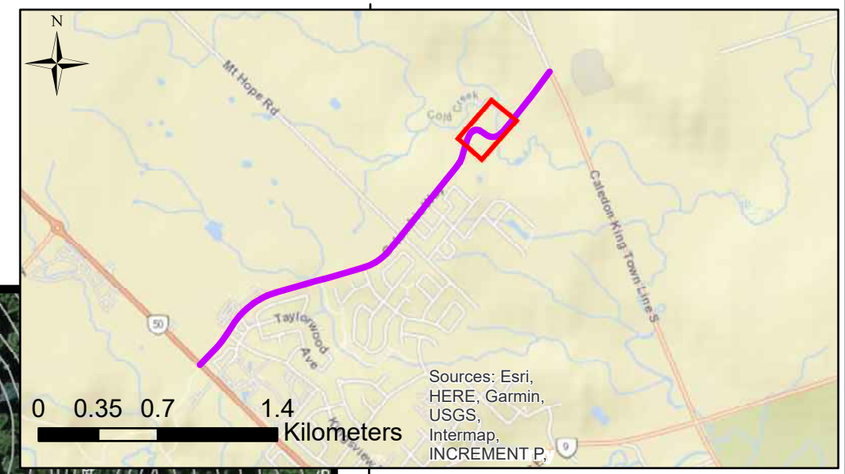
Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No.	XXX
SCALE	1:1,500						
DATE	September 27, 2021			DRAWING NUMBER	**Figure 3-6**	SHEET	

195072 Columbia Way



0 25 50 100 150 200 Meters



NOTES

Runoff Coefficients:

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LEGEND

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- MHs
- Outlets
- RoadCulverts
- Watercourse
- Roads
- Proposed Subcatchments
- Contours1m
- Waterbody

R.V.Anderson Associates Limited
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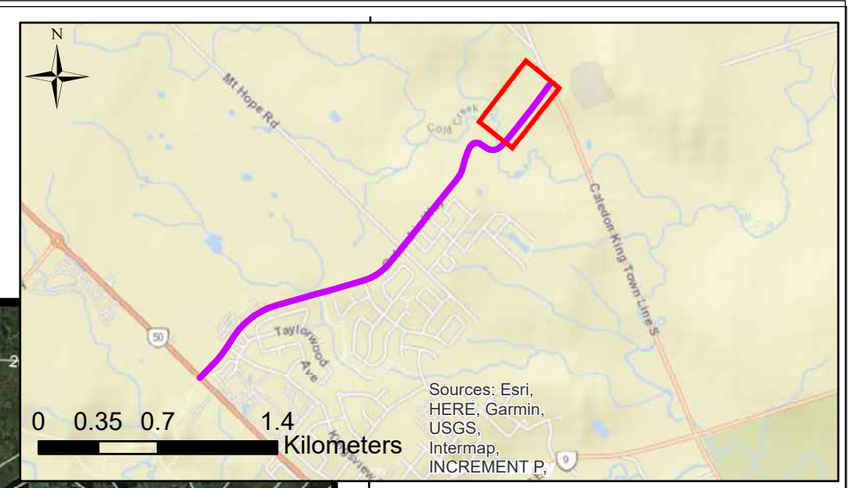
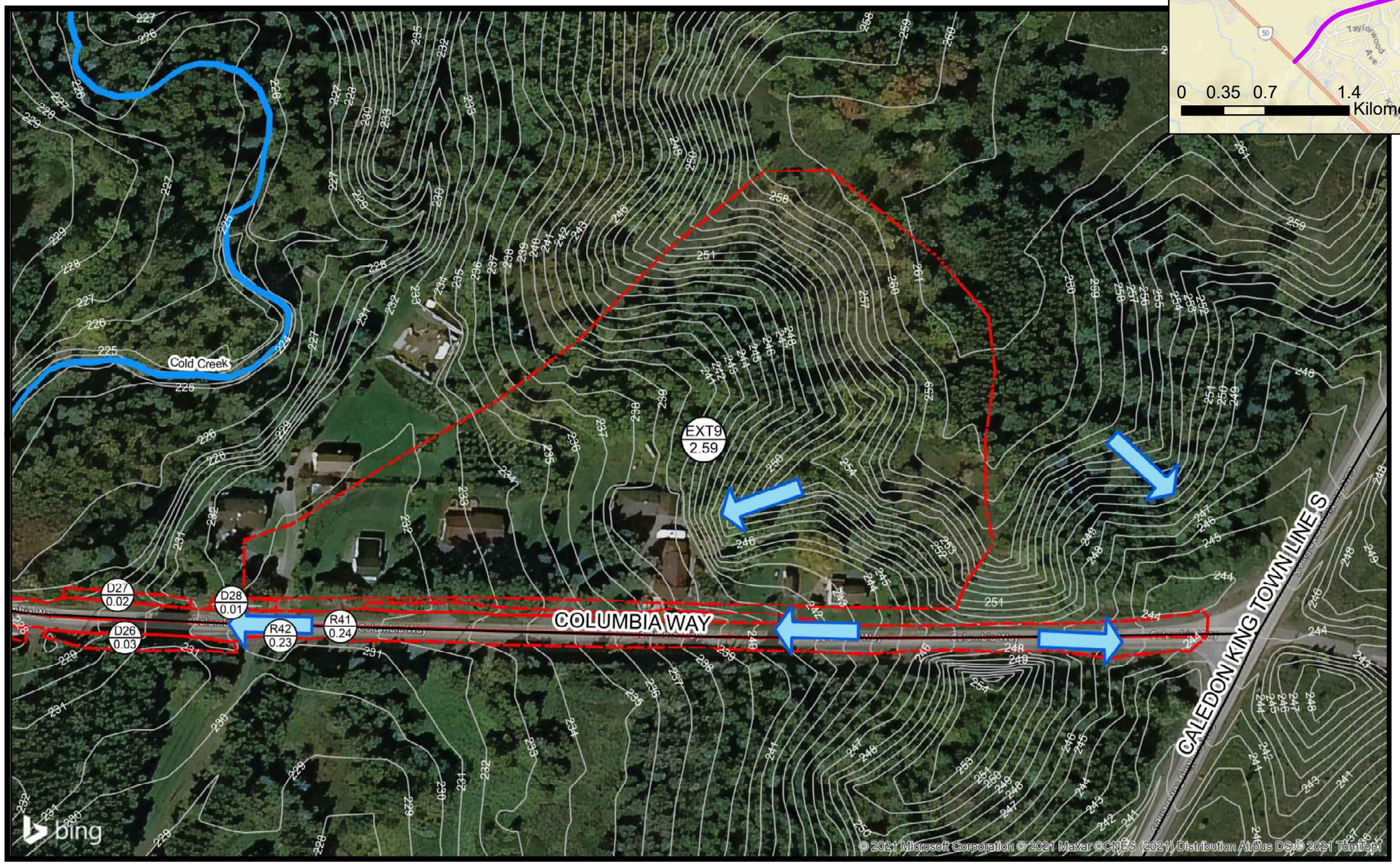
195072 Columbia Way Road Class EA
Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021			DRAWING NUMBER	**Figure 3-7**		SHEET

195072 Columbia Way





0 25 50 100 150 200 Meters

NOTES

Runoff Coefficients:

R = Road, 0.90
D = Ditch, 0.20
EXT = External areas, 0.25
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LEGEND

EXT1 / 1.08 — Drainage Area ID / Area in ha

Drainage Flow

MHs

Outlets

RoadCulverts

Watercourse

Roads

Proposed Subcatchments

Contours1m

Waterbody

R.V.Anderson Associates Limited
engineering environment infrastructure

195072 Columbia Way Road Class EA

Proposed Drainage Plan

DESIGN	NVA	DRAWN	IP	CHECKED	O.O	CONTRACT No. XXX	
SCALE	1:1,500						
DATE	September 27, 2021			DRAWING NUMBER	**Figure 3-8**		SHEET

APPENDIX C

Dry Pond- Drainage Catchments

Legend

- Building & Parking 75% Imp
- External Catchment
- Grass Land 0% Imp
- Residential 55% Imp
- Paved Road 95% Imp
- Watercouse Valley

Paper Size ANSI A

0 0.075 0.15

Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983
Grid: NAD 1983 UTM Zone 17N

N

GHD

TOWN OF CALEDON
STORMWATER RETROFIT PROJECT

DRAINAGE CATCHMENT AREAS

Project No. **11140848**
Revision No. **-**
Date **03/01/2019**

FIGURE 2-2

C:\Users\lhu\Works\ON\Waterloo\11140848_Caledon swm retrofit\20190109 Wetland Design\GIS\Fig3-2_CA.mxd
Print date: 01 Mar 2019 - 13:51

Data source: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: lhu

APPENDIX D

HEC-RAS Summary Output

HEC-RAS Plan: Default Scenario River: Cold Creek West Reach: Reach1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1201.198 10.09.25	2-year	0.64	224.34	224.69		224.71	0.003000	0.63	1.02	4.50	0.42
Reach1	1201.198 10.09.25	5-year	1.24	224.34	224.80		224.83	0.003281	0.80	1.56	5.44	0.46
Reach1	1201.198 10.09.25	10-year	6.87	224.34	225.29		225.40	0.003581	1.56	5.73	14.08	0.56
Reach1	1201.198 10.09.25	25-year	6.87	224.34	225.29		225.40	0.003581	1.56	5.73	14.08	0.56
Reach1	1201.198 10.09.25	50-year	12.90	224.34	225.65		225.77	0.002591	1.71	14.52	36.13	0.51
Reach1	1201.198 10.09.25	100-year	16.28	224.34	225.85		225.95	0.001824	1.60	22.32	39.91	0.44
Reach1	1201.198 10.09.25	350-year	51.21	224.34	227.53		227.56	0.000330	1.17	124.02	75.34	0.21
Reach1	1201.198 10.09.25	500-year	69.57	224.34	227.86		227.89	0.000367	1.32	149.58	79.32	0.23
Reach1	1201.198 10.09.25	Regional	161.51	224.34	229.05		229.11	0.000485	1.86	254.26	97.82	0.28
Reach1	1201.174 10.09.24	2-year	0.64	224.34	224.67	224.55	224.69	0.002558	0.58	1.12	5.39	0.39
Reach1	1201.174 10.09.24	5-year	1.24	224.34	224.78	224.63	224.81	0.002721	0.73	1.80	7.04	0.42
Reach1	1201.174 10.09.24	10-year	6.87	224.34	225.28	225.01	225.37	0.002824	1.36	6.32	11.93	0.50
Reach1	1201.174 10.09.24	25-year	6.87	224.34	225.28	225.01	225.37	0.002824	1.36	6.32	11.93	0.50
Reach1	1201.174 10.09.24	50-year	12.90	224.34	225.63	225.27	225.75	0.002386	1.61	11.72	20.73	0.49
Reach1	1201.174 10.09.24	100-year	16.28	224.34	225.80	225.42	225.92	0.002165	1.69	14.72	25.55	0.48
Reach1	1201.174 10.09.24	350-year	51.21	224.34	227.41	226.18	227.53	0.000863	1.84	48.83	72.39	0.35
Reach1	1201.174 10.09.24	500-year	69.57	224.34	227.67	226.47	227.85	0.001135	2.24	54.67	75.95	0.40
Reach1	1201.174 10.09.24	Regional	161.51	224.34	229.03	227.49	229.10	0.000540	1.96	238.74	102.22	0.30
Reach1	1201.162 x-99 (10.09.23)		Bridge	Road Elev.:228.31								
Reach1	1201.154 10.09.22	2-year	0.64	224.34	224.63	224.49	224.64	0.001705	0.48	1.32	5.67	0.32
Reach1	1201.154 10.09.22	5-year	1.24	224.34	224.73	224.56	224.75	0.002010	0.64	1.94	6.23	0.36
Reach1	1201.154 10.09.22	10-year	6.87	224.34	225.23	224.93	225.31	0.002402	1.28	5.87	9.36	0.46
Reach1	1201.154 10.09.22	25-year	6.87	224.34	225.23	224.93	225.31	0.002402	1.28	5.87	9.36	0.46
Reach1	1201.154 10.09.22	50-year	12.90	224.34	225.55	225.18	225.69	0.002514	1.65	9.03	10.12	0.50
Reach1	1201.154 10.09.22	100-year	16.28	224.34	225.69	225.29	225.85	0.002651	1.83	10.46	10.35	0.53
Reach1	1201.154 10.09.22	350-year	51.21	224.34	226.36	226.17	226.99	0.005833	3.63	17.74	11.36	0.84
Reach1	1201.154 10.09.22	500-year	69.57	224.34	226.53	226.53	227.49	0.008058	4.51	19.66	11.65	1.00
Reach1	1201.154 10.09.22	Regional	161.51	224.34	228.26	228.26	229.08	0.003771	4.62	76.11	65.37	0.76
Reach1	1201.148 10.09.21	2-year	0.64	224.37	224.55	224.55	224.60	0.015056	1.01	0.63	4.67	0.87
Reach1	1201.148 10.09.21	5-year	1.24	224.37	224.61	224.61	224.70	0.018152	1.35	0.92	4.95	1.00
Reach1	1201.148 10.09.21	10-year	6.87	224.37	225.11		225.26	0.006221	1.75	4.15	8.49	0.71
Reach1	1201.148 10.09.21	25-year	6.87	224.37	225.11		225.26	0.006221	1.75	4.15	8.49	0.71
Reach1	1201.148 10.09.21	50-year	12.90	224.37	225.41		225.64	0.005423	2.13	7.03	10.48	0.71
Reach1	1201.148 10.09.21	100-year	16.28	224.37	225.52	225.38	225.80	0.005815	2.38	8.19	11.01	0.75
Reach1	1201.148 10.09.21	350-year	51.21	224.37	226.35	226.35	226.92	0.006182	3.65	23.40	25.02	0.86
Reach1	1201.148 10.09.21	500-year	69.57	224.37	226.61	226.61	227.30	0.006542	4.10	30.25	27.33	0.90
Reach1	1201.148 10.09.21	Regional	161.51	224.37	227.70	227.70	228.61	0.005968	5.16	66.88	40.00	0.92

HEC-RAS Plan: Eng. Segment4 River: Cold_10_7 Reach: 10.7

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
10.7	3187.108	2-year	0.17	253.58	253.96	253.79	253.97	0.001025	0.28	0.60	3.43	0.21
10.7	3187.108	5-year	0.30	253.58	254.06	253.85	254.06	0.000905	0.31	0.97	4.34	0.21
10.7	3187.108	10-year	1.68	253.58	254.54	254.09	254.55	0.000508	0.40	4.21	9.21	0.18
10.7	3187.108	25-year	2.15	253.58	254.65	254.14	254.66	0.000443	0.43	5.23	10.49	0.17
10.7	3187.108	50-year	2.50	253.58	254.72	254.17	254.73	0.000412	0.44	6.02	11.37	0.17
10.7	3187.108	100-year	2.87	253.58	254.80	254.20	254.81	0.000368	0.45	6.97	12.35	0.16
10.7	3187.108	Regional	9.86	253.58	256.22	254.57	256.22	0.000058	0.36	64.25	75.22	0.08
10.7	3115.165	2-year	0.17	253.30	253.66	253.66	253.75	0.033322	1.31	0.13	0.72	0.99
10.7	3115.165	5-year	0.30	253.30	253.75	253.75	253.86	0.031102	1.48	0.20	0.90	0.99
10.7	3115.165	10-year	1.68	253.30	254.19	254.19	254.42	0.025147	2.10	0.80	2.02	1.00
10.7	3115.165	25-year	2.15	253.30	254.29	254.29	254.53	0.024170	2.20	0.98	2.90	1.00
10.7	3115.165	50-year	2.50	253.30	254.36	254.35	254.61	0.022431	2.22	1.13	3.51	0.97
10.7	3115.165	100-year	2.87	253.30	254.54	254.41	254.71	0.013077	1.87	1.54	4.83	0.76
10.7	3115.165	Regional	9.86	253.30	256.06	255.09	256.20	0.002024	1.64	6.00	32.85	0.37
10.7	3075		Culvert	Road Elev.:257.84								
10.7	3035.861	2-year	0.17	252.60	252.69	252.69	252.72	0.029012	0.82	0.21	6.43	0.99
10.7	3035.861	5-year	0.30	252.60	252.72	252.72	252.77	0.025858	0.99	0.30	8.26	1.00
10.7	3035.861	10-year	1.68	252.60	252.94	252.94	253.10	0.017521	1.76	0.95	20.95	1.00
10.7	3035.861	25-year	2.15	252.60	253.00	253.00	253.18	0.016432	1.91	1.13	22.31	0.99
10.7	3035.861	50-year	2.50	252.60	253.03	253.03	253.24	0.016183	2.02	1.24	22.97	1.00
10.7	3035.861	100-year	2.87	252.60	253.07	253.07	253.30	0.015670	2.11	1.36	23.19	1.00
10.7	3035.861	Regional	9.86	252.60	253.65	253.65	254.17	0.011907	3.18	3.10	26.44	1.00
10.7	2972.104	2-year	0.17	251.92	252.05		252.06	0.002677	0.24	0.70	10.52	0.30
10.7	2972.104	5-year	0.30	251.92	252.08		252.09	0.002824	0.29	1.04	12.54	0.32
10.7	2972.104	10-year	1.68	251.92	252.23		252.24	0.002967	0.48	3.53	21.90	0.37
10.7	2972.104	25-year	2.15	251.92	252.25		252.27	0.003061	0.53	4.10	23.39	0.38
10.7	2972.104	50-year	2.50	251.92	252.27		252.29	0.003119	0.57	4.52	24.39	0.39
10.7	2972.104	100-year	2.87	251.92	252.29		252.31	0.003156	0.60	4.94	25.45	0.40
10.7	2972.104	Regional	9.86	251.92	252.50	252.35	252.55	0.003824	1.02	11.79	38.83	0.49
10.7	2920.147	2-year	0.17	251.74	251.78		251.79	0.014338	0.35	0.53	19.22	0.62
10.7	2920.147	5-year	0.30	251.74	251.79		251.80	0.014997	0.43	0.78	20.66	0.66
10.7	2920.147	10-year	1.68	251.74	251.85	251.85	251.89	0.027639	0.97	2.00	22.63	1.02
10.7	2920.147	25-year	2.15	251.74	251.87	251.87	251.92	0.026985	1.05	2.37	23.19	1.03
10.7	2920.147	50-year	2.50	251.74	251.88	251.88	251.93	0.026367	1.10	2.64	23.60	1.03
10.7	2920.147	100-year	2.87	251.74	251.89	251.89	251.95	0.026126	1.15	2.90	23.97	1.04
10.7	2920.147	Regional	9.86	251.74	252.05	252.05	252.16	0.021318	1.60	7.07	29.41	1.05
10.7	2858.997	2-year	0.17	250.36	250.42	250.42	250.44	0.038331	0.58	0.29	8.67	1.01
10.7	2858.997	5-year	0.30	250.36	250.44	250.44	250.46	0.035504	0.65	0.46	10.80	1.01
10.7	2858.997	10-year	1.68	250.36	250.56		250.58	0.009385	0.67	2.52	21.40	0.62
10.7	2858.997	25-year	2.15	250.36	250.59		250.61	0.007005	0.66	3.28	22.80	0.55
10.7	2858.997	50-year	2.50	250.36	250.62		250.64	0.005929	0.65	3.84	23.81	0.52
10.7	2858.997	100-year	2.87	250.36	250.64		250.66	0.005207	0.65	4.40	24.76	0.49
10.7	2858.997	Regional	9.86	250.36	250.94		250.97	0.002145	0.72	13.66	33.82	0.36

APPENDIX E

SWM Design Criteria

Watershed	Water Quantity Control Criteria	References and Notes
Etobicoke Creek	▪ Control post-development peak flows to 85% of pre-development levels for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms) for the following reach: ‣ Headwaters: north of Old School Road and west of McLaughlin Road Unit flow rates have been established (see Appendix A) and should be used for all sites that require control ▪ Control post-development peak flows to pre-development levels for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms) for the following reach: ‣ Headwaters: east of McLaughlin Road, between Mayfield and Old School Road ‣ Spring Creek: north of Bovaird Drive ‣ Little Etobicoke Creek Unit flow rates have been established (see Appendix A) and should be used for all sites that require control ▪ For all other tributaries and reaches, post to pre development quantity controls are not required ▪ Development outside of the approved urban boundary when the hydrology study was finalized may require Regional storm protection, proponents should consult with TRCA staff to confirm	▪ Hydrologic Model: VISUAL OTTHYMO ▪ Return period peak flows based on the AES - 6 hour design storm. ▪ Hydrology Study: "Etobicoke Creek Hydrology Update" (Totten Sims Hubicki, 2007)
Highland Creek	▪ Control post development peak flows to pre-development levels for all storms up to and including the 100 year storm (I.e. 2, 5, 10, 25, 50 and 100 year storms)	▪ Hydrologic Model: VISUAL OTTHYMO. ▪ Return period peak flows based on 6 hour AES event. ▪ Hydrology Study: Highland Creek Hydrology Update (Aquafor Beech Ltd., December 2004)
Humber River	▪ Control post-development peak flows to pre-development levels for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms) except for the main branches of the Lower, Main, East, Upper and West Humber where no quantity control is required (see Appendix A) ▪ Unit flow relationships have been established (see Appendix A) and should be used for all other sites located in the Humber River Watershed not discharging to the main channels listed above. ▪ Development outside of the approved urban boundary when the hydrology study was finalized may require Regional storm protection, proponents should consult with TRCA staff to confirm	▪ Hydrologic Model SWMHYMO ▪ Return period peak flows based on 6 & 12 hours AES (basin specific - Tributary Based Control Strategy) ▪ Hydrology Study: - "Humber River Watershed Hydrology Update" (Aquafor Beech Ltd., Nov. 2002)
Krosno Creek	▪ No quantity control required for sites draining directly to Frenchmans Bay. ▪ For all other areas, control post-development peak flows to pre-development levels for all storms up to and including the 100 year storm (i.e., 2, 5, 10, 25, 50, and 100 year storms)	▪ Hydrologic Model: VISUAL OTTHYMO. ▪ Return period peak flows based on the Chicago - 4 hour design storm. ▪ Hydrology Study: Stormwater Management Master Plan, Frenchmans Bay, April 2009 (MMM Group Ltd.)

(2) Use of table 9–1

Chapters 7 and 8 of NEH 630 describe how soils and covers of watersheds or other land areas are classified in the field. After the classification is completed, CNs are read from table 9–1 and applied as described in chapter 10. Because the principal use of CNs is for estimating runoff from rainfall, the examples of applications are given in chapter 10.

Table 9–1 Runoff curve numbers for agricultural lands [1/]

Cover description			CN for hydrologic soil group			
cover type	treatment [2/]	hydrologic condition [3/]	A	B	C	D
Fallow	Bare Soil	---	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C & T)	Poor	66	74	80	82
		Good	62	71	78	81
	C & T + CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C & T	Poor	61	72	79	82
		Good	59	70	78	81
	C & T + CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C & T	Poor	63	73	80	83
		Good	51	67	76	80

See footnotes at end of table.

Table 9–1 Runoff curve numbers for agricultural lands [1/] — Continued

Cover description			CN for hydrologic soil group			
cover type	treatment [2/]	hydrologic condition [3/]	A	B	C	D
Pasture, grassland, or range-continuous forage for grazing [4/]		Poor	68	79	86	89
		Fair	49	69	79	84
		Good	39	61	74	80
Meadow-continuous grass, protected from grazing and generally mowed for hay		Good	30	58	71	78
Brush-brush-forbs-grass mixture with brush the major element [5/]		Poor	48	67	77	83
		Fair	35	56	70	77
		Good	30 [6/]	48	65	73
Woods-grass combination (orchard or tree farm) [7/]		Poor	57	73	82	86
		Fair	43	65	76	82
		Good	32	58	72	79
Woods [8/]		Poor	45	66	77	83
		Fair	36	60	73	79
		Good	30	55	70	77
Farmstead--buildings, lanes, driveways, and surrounding lots		---	59	74	82	86
Roads (including right-of-way):						
Dirt		---	72	82	87	89
Gravel		---	76	85	89	91

1/ Average runoff condition, and I_a=0.2s.

2/ Crop residue cover applies only if residue is on at least 5 percent of the surface throughout the year.

3/ Hydrologic condition is based on combinations of factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good ≥20%), and (e) degree of surface toughness.
Poor: Factors impair infiltration and tend to increase runoff.
Good: Factors encourage average and better then average infiltration and tend to decrease runoff.
For conservation tillage poor hydrologic condition, 5 to 20 percent of the surface is covered with residue (less than 750 pounds per acre for row crops or 300 pounds per acre for small grain).
For conservation tillage good hydrologic condition, more than 20 percent of the surface is covered with residue (greater than 750 pounds per acre for row crops or 300 pounds per acre for small grain).

4/ Poor: < 50% ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed.

5/ Poor: < 50% ground cover.
Fair: 50 to 75% ground cover.
Good: > 75% ground cover.

6/ If actual curve number is less than 30, use CN = 30 for runoff computation.

7/ CNs shown were computed for areas with 50 percent woods and 50 percent grass (pasture) cover. Other combinations of conditions may be computed from the CNs for woods and pasture.

8/ Poor: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed, but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 9–5 Runoff curve numbers for urban areas [1/]

Cover description cover type and hydrologic condition	Average percent impervious area [2/]	-- CN for hydrologic soil group -- A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4/]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation)		77	86	91	94

1/ Average runoff condition, and $I_a = 0.2S$.

2/ The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition.

3/ CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space type.

4/ Composite CNs for natural desert landscaping should be computed using figures 9–3 or 9–4 based on the impervious area percentage (CN=98) and the pervious area CN. The pervious area CNs are assumed equivalent to desert shrub in poor hydrologic condition.

APPENDIX F

Pre- Post Development Comparison

TABLE 5-1 - SWMM MODEL INPUT PARAMETERS

Town of Caledon

Columbia Way

MODELING DESIGN CRITERIA - CLASS EA SUBMISSION

ITEM	STANDARDS DESIGN STANDARD	PROPOSED STANDARD	NOTES
GENERAL			
ROUTING MODEL		Dynamic Wave	
	10 YR FLOWS	10 YR FLOWS	TOWN OF CALEDON STANDARD (pg 31) - DEVELOPMENT STANDARDS, POLICIES AND GUIDELINES
	Percent of Impervious Area		
	Land Cover	**% Imperviousness**	
	Asphalt	95	Based on Land Cover
	Concrete	95	Based on Land Cover
	Gravel	72	Based on Land Cover
	Grass	1	Based on Land Cover
DESIGN STORM	6 & 12 Hours AES Storm Distribution	6 Hour AES Storm Distribution	TRCA SWM Guideline 2012
SUBCATCHMENTS			
N Imperv		0.013	
N Perv		0.25	
Dstore Imperv		2 mm	
Dstore Perv		5mm	
Zero Imperv		25%	
Infiltration Model		CURVE_NUMBER	
Curve Number		86,92 and 79	Appendix D,Curve Number Standard Values
Drying Time		7	
NODES/LINKS			
Conduit Roughness		0.013	TOWN OF CALEDON STANDARD (pg 32) - DEVELOPMENT STANDARDS, POLICIES AND GUIDELINES
TIME STEPS			
Raingage Object's Time Interval for 6-hour AES Storm Distribution		15	
Reporting Time Step		10 sec	
Runoff: Wet Weather Time Step		5 min	
Runoff: Dry Weather Time Step		5 min	
Routing Time Step		1 sec	

Table 5-2: Pre and Post Development Scenarios Comparison for 100-Yr Storm Event

		Outlet 1 (1.2m D CSP)	% Change	Outlet 2 (Dry Pond)	% Change	Outlet 3 (Mount Hope Rd)	% Change	Outlet 4 (Ex.DICB)	% Change	Outlet 5 (0.45 CSP)	% Change	Outlet 6 (Bridge)	% Change
Pre-Dev.	Contributing Area (ha)	3.21		4.49		1.24		0.59		0.73		4.11	
	Contributing Imp. Area (ha)	0.61		1.67		0.33		0.29		0.30		0.91	
	Peak Flow 100-Yr (m^3/s)	0.23		0.38		0.09		0.072		0.08		0.34	
Post-Dev.	Contributing Area (ha)	3.23	1%	4.45	-1%	1.3	5%	0.54	-8%	0.73	0%	4.12	0%
	Contributing Imp. Area (ha)	0.55	-9%	1.25	-25%	0.30	-9%	0.26	-12%	0.26	-13%	0.91	0%
	Peak Flow 100-Yr (m^3/s)	0.22	-4%	0.33	-13%	0.08	-15%	0.06	-11%	0.07	-15%	0.31	-9%

Note: Positive values indicate a percentage increase whereas negative values indicate the percentage decrease.

APPENDIX G

PCSWMM- Ditches and Culvert Modelling Figures

Figure 4-1: Pre-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

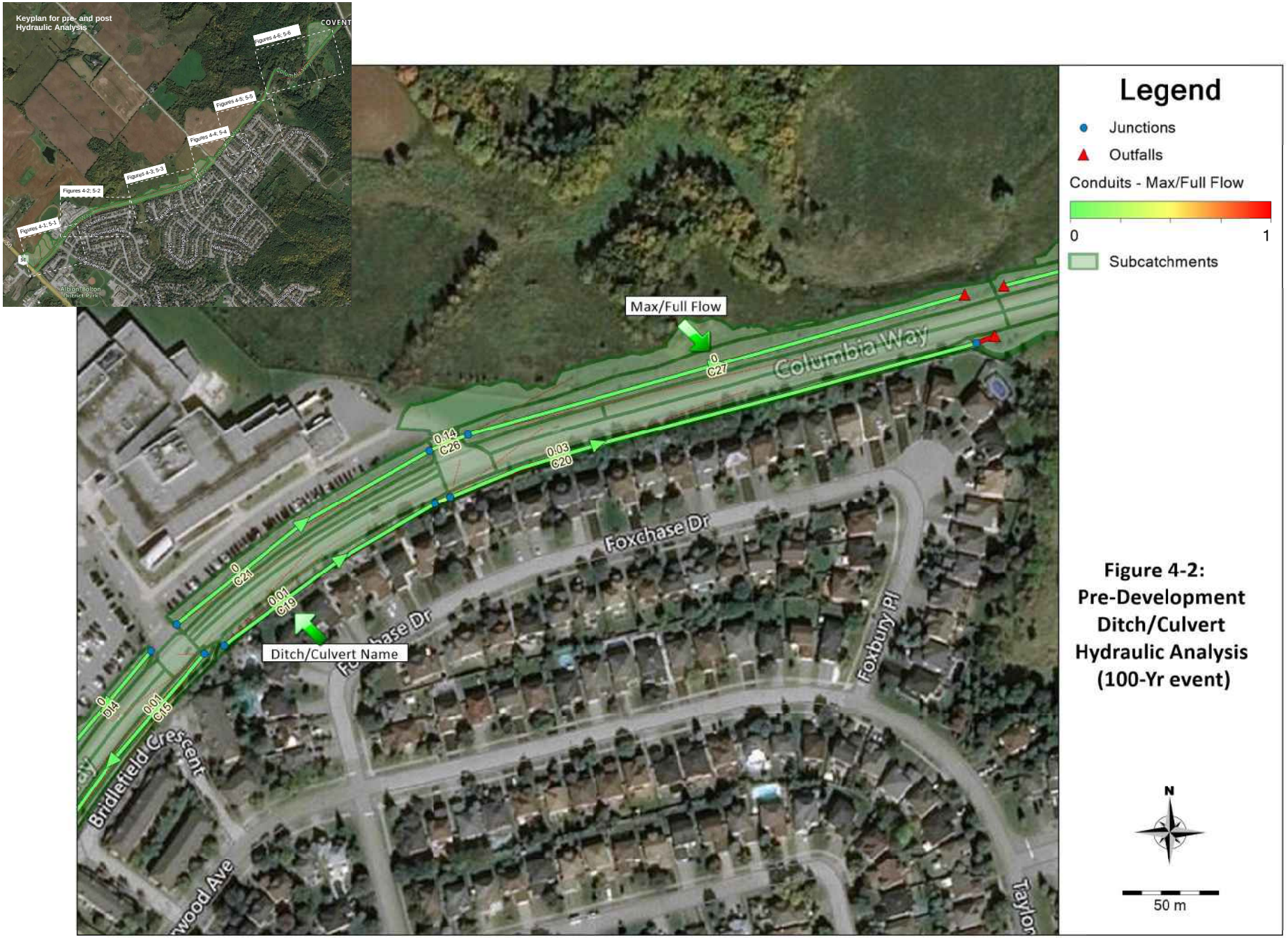

Figure 4-2: Pre-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 4-3: Pre-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

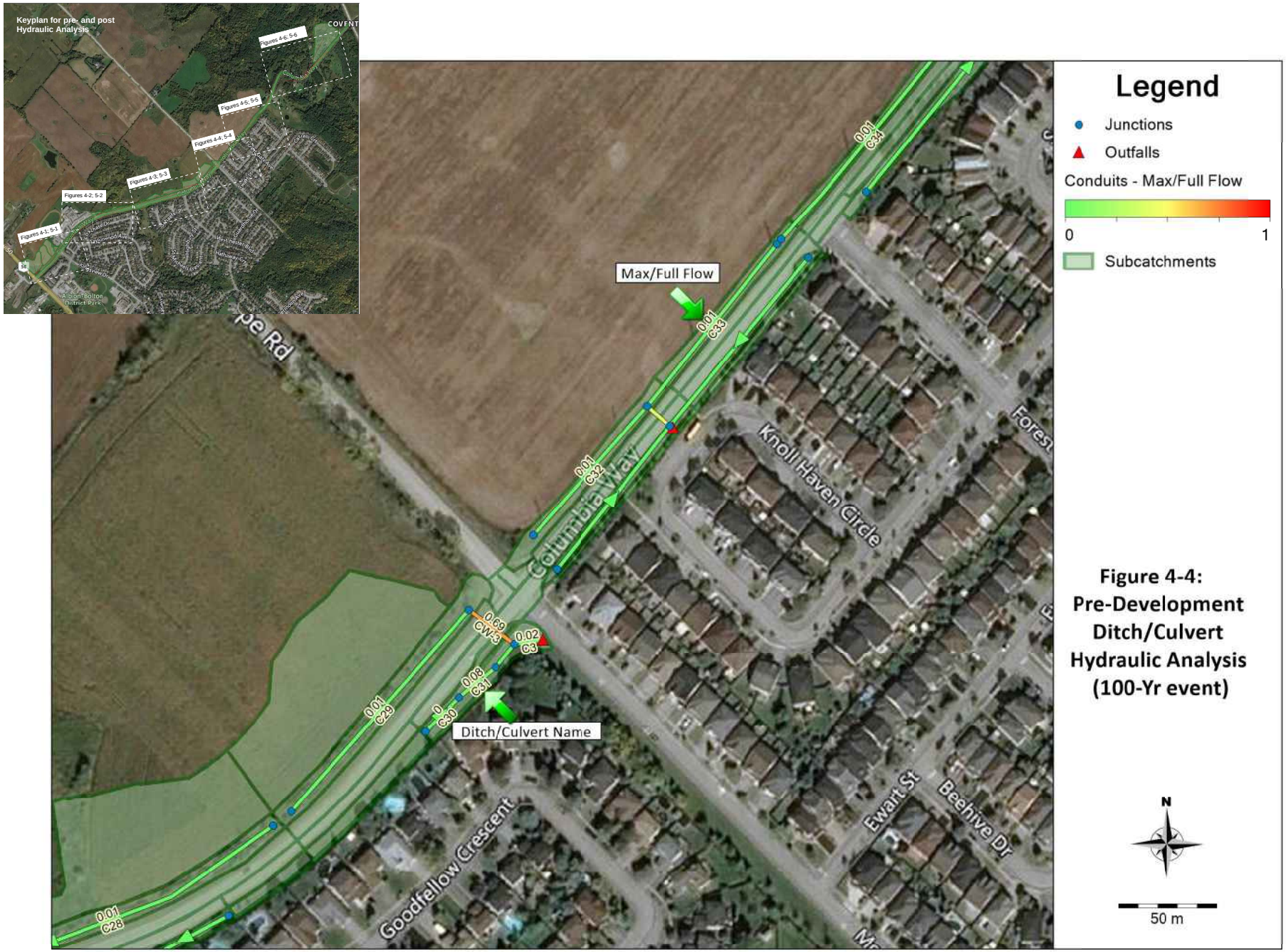

Figure 4-4: Pre-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 4-5: Pre-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 4-6: Pre-Development Hydraulic Analysis (100-Yr event)

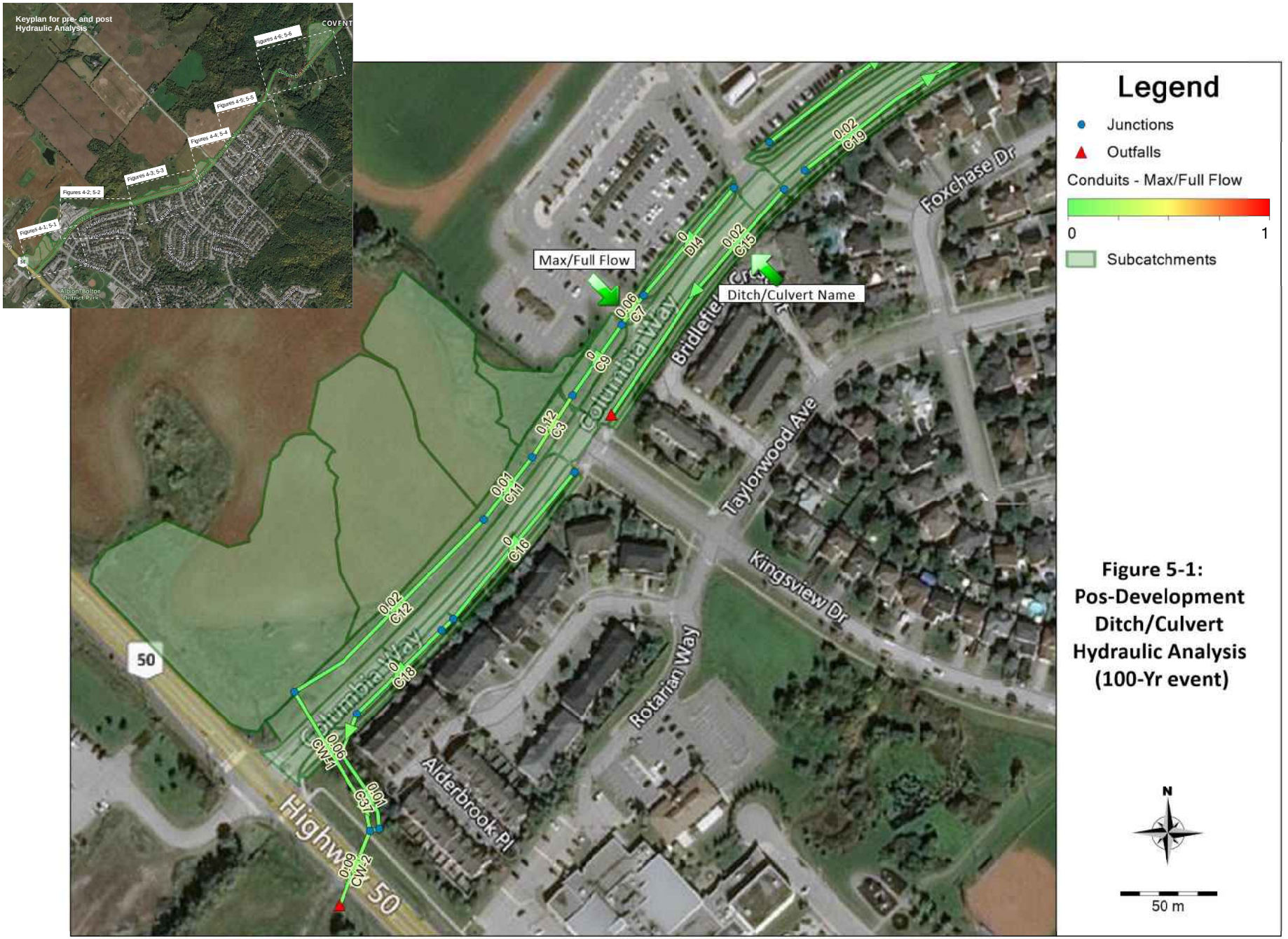

Figure 5-1: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 5-2: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 5-3: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Figure 5-4: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

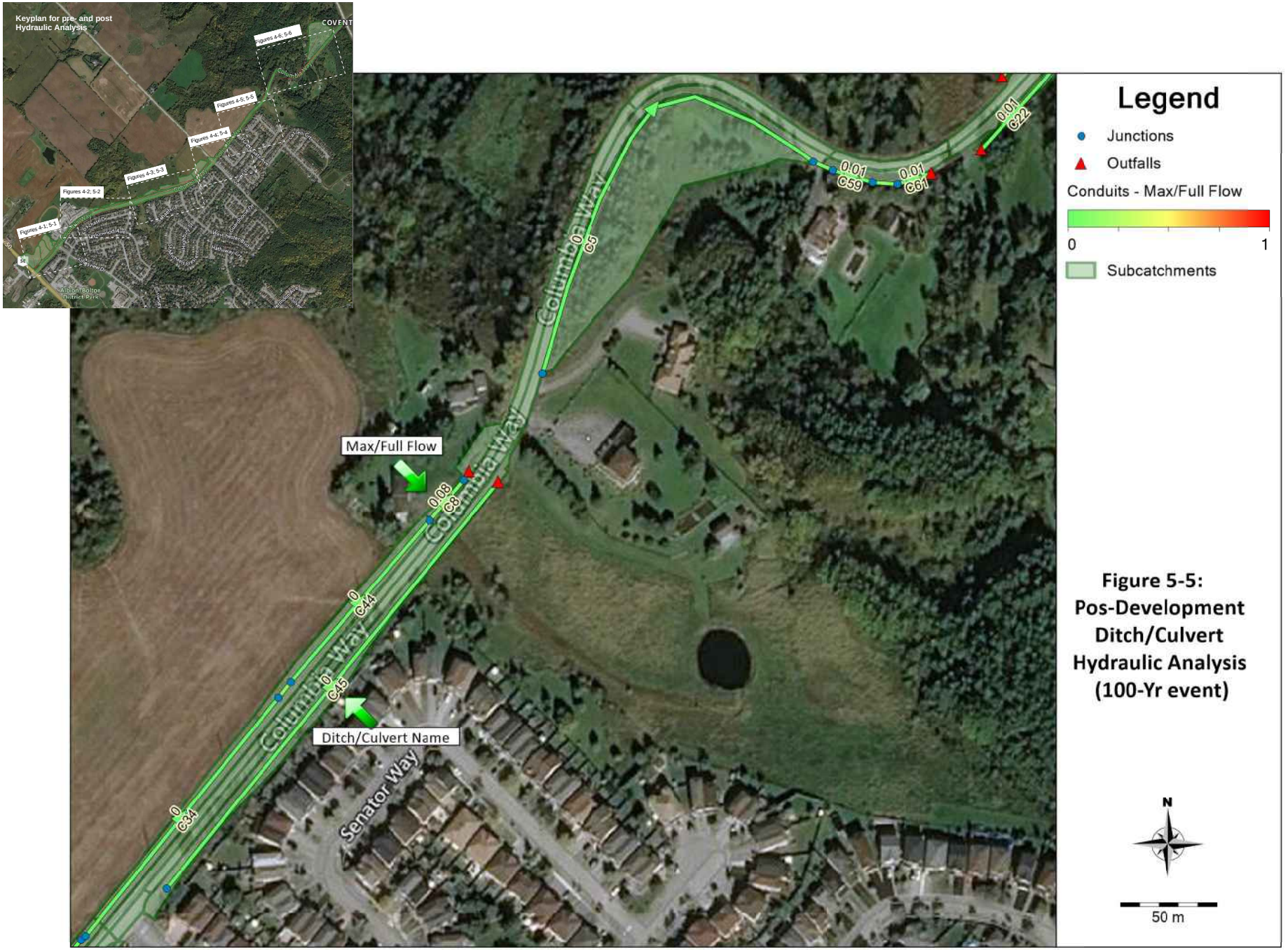

Figure 5-5: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

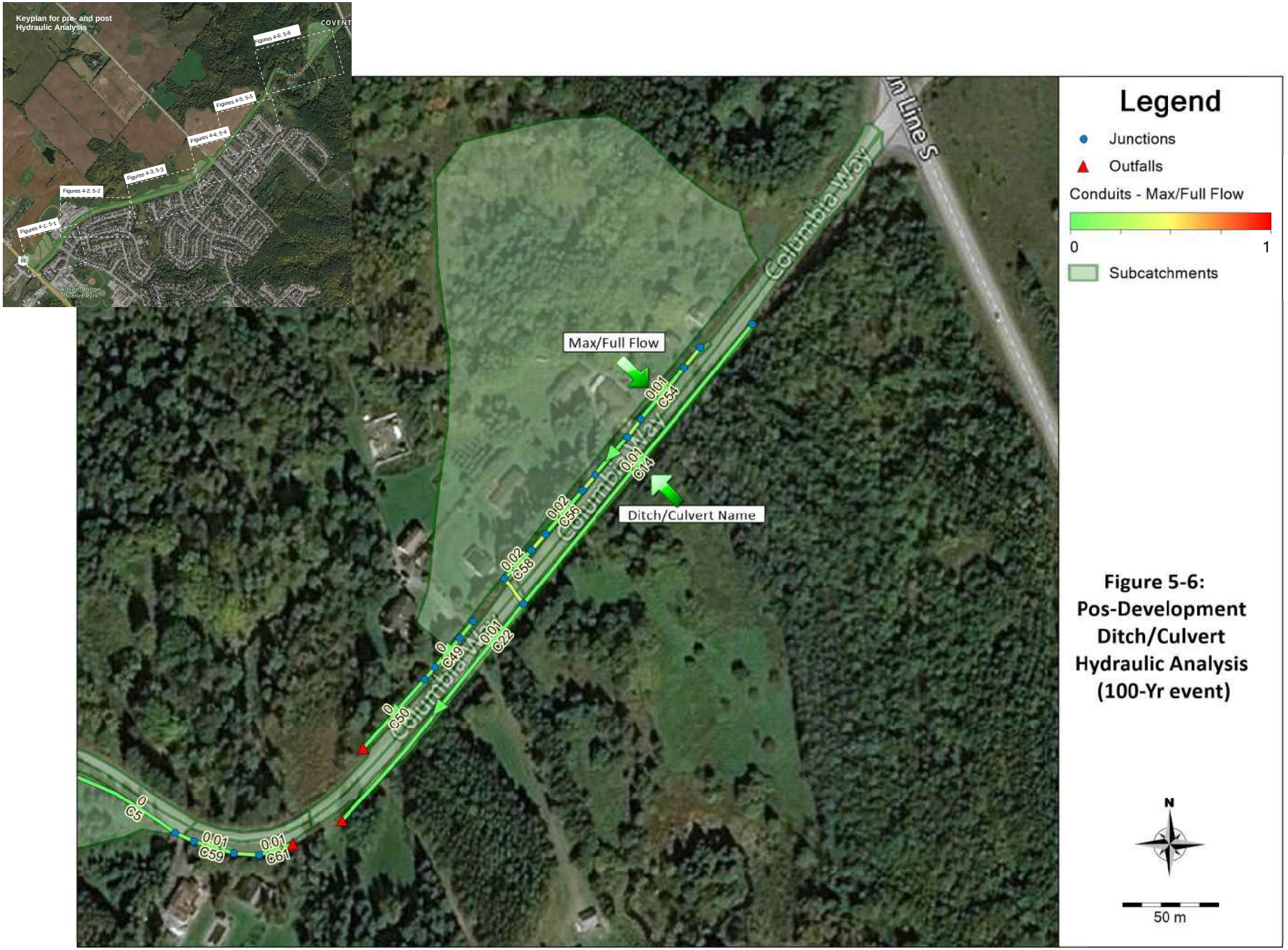

Figure 5-6: Pos-Development Ditch/Culvert Hydraulic Analysis (100-Yr event)

Table 5-3: Pre-development Scenario- Culverts and Ditches Modelling Summary Output for 10 Year_6hr_AES Design Storm

Name	Cross-Section[1]	Geom1 (m)[2]	Length (m)	Slope %	Roughness	Max. |Flow| (m^3/s)	Max. |Velocity| (m/s)	Max/Full Flow	Max/Full Depth
CW-3	CIRCULAR	0.4	29.7	0.6%	0.024	0.04	0.94	0.44	0.37
CW-4	CIRCULAR	0.4	15.0	0.5%	0.024	0.02	0.69	0.26	0.29
DI4	IRREGULAR	0	72.3	0.9%	0.027	0	0	0	0.02
C9	IRREGULAR	0	44.1	1.0%	0.027	0.007	0.19	0	0.07
C11	IRREGULAR	0	43.9	0.9%	0.027	0.043	0.49	0.01	0.11
C12	IRREGULAR	0	131.3	1.6%	0.027	0.065	0.31	0.01	0.18
C13	CIRCULAR	0.45	18.9	0.5%	0.024	0.001	0.23	0.01	0.07
C8	CIRCULAR	0.45	6.0	0.2%	0.024	0.009	0.66	0.12	0.14
C10	IRREGULAR	0	13.5	1.9%	0.027	0.011	0.16	0	0.09
C14	CIRCULAR	0.45	6.9	0.2%	0.024	0.011	0.44	0.18	0.22
C15	IRREGULAR	0	145.7	1.0%	0.027	0.032	0.57	0.01	0.1
C16	IRREGULAR	0	97.4	1.2%	0.027	0.006	0.12	0	0.15
C17	CIRCULAR	0.45	10.0	0.9%	0.024	0.011	0.72	0.07	0.17
C18	IRREGULAR	0	66.9	0.1%	0.027	0.011	0.12	0.03	0.24
C19	IRREGULAR	0	131.0	1.4%	0.027	0.026	0.37	0.01	0.16
C20	IRREGULAR	0	281.8	1.7%	0.027	0.078	0.43	0.02	0.33
C22	CIRCULAR	0.45	18.0	1.3%	0.024	0.035	0.85	0.2	0.31
C23	IRREGULAR	0	188.4	1.4%	0.027	0.036	0.41	0.01	0.18
C24	CIRCULAR	0.45	8.6	1.1%	0.024	0.027	0.75	0.17	0.28
C25	CIRCULAR	0.3	8.8	1.6%	0.024	0.059	0.95	0.89	0.81
C21	IRREGULAR	0	158.2	1.3%	0.027	0.007	0.27	0	0.07
C26	CIRCULAR	0.45	17.9	0.4%	0.024	0.007	0.42	0.07	0.18
C27	IRREGULAR	0	269.0	2.0%	0.027	0.032	0.67	0	0.07
C28	IRREGULAR	0	420.4	1.2%	0.027	0.078	0.76	0.01	0.12
C29	IRREGULAR	0	135.1	0.9%	0.027	0.035	0.27	0	0.15
C4	IRREGULAR	0	50.7	2.1%	0.027	0.004	0.32	0	0.08
C30	IRREGULAR	0	23.9	2.1%	0.027	0.011	0.32	0	0.11
C31	CIRCULAR	0.45	24.0	2.9%	0.024	0.014	0.9	0.06	0.16
C32	IRREGULAR	0	86.0	0.6%	0.027	0.011	0.18	0.01	0.16
C33	IRREGULAR	0	104.5	0.9%	0.027	0.008	0.13	0	0.15
C34	IRREGULAR	0	157.3	2.9%	0.027	0.021	0.33	0.01	0.13
C35	IRREGULAR	0	109.4	1.3%	0.027	0.014	0.46	0	0.07
C36	IRREGULAR	0	91.7	0.9%	0.027	0.011	0.38	0	0.07
CW-1	CIRCULAR	1.2	80.0	2.3%	0.024	0.118	1.06	0.04	0.17
CW-2	RECT_CLOSED	1	42.0	0.9%	0.013	0.122	0.92	0.05	0.15
C38	CIRCULAR	0.45	15.0	3.7%	0.024	0.004	0.43	0.01	0.15
CW-6	CIRCULAR	0.4	27.0	1.6%	0.024	0.004	0.24	0.03	0.2
C43	IRREGULAR	0	14.8	3.8%	0.027	0.013	0.29	0	0.12
C1	CIRCULAR	0.45	15.0	1.3%	0.024	0.019	1.11	0.11	0.16
C37	IRREGULAR	0	47.3	7.0%	0.027	0.019	0.75	0.01	0.1
C41	CIRCULAR	0.45	7.1	3.5%	0.024	0.02	1.23	0.07	0.16
C44	IRREGULAR	0	108.7	6.4%	0.027	0.022	0.27	0	0.14
C45	IRREGULAR	0	164.7	4.8%	0.027	0.021	0.57	0	0.08
C46	CIRCULAR	0.45	11.9	5.5%	0.024	0.021	1.09	0.06	0.19
C47	IRREGULAR	0	82.5	3.8%	0.027	0.023	0.9	0	0.06
C3	IRREGULAR	0	13.4	1.4%	0.027	0.052	0.7	0.01	0.16
C7	CIRCULAR	0.45	7.3	0.7%	0.024	0.004	0.44	0.03	0.11
C39	IRREGULAR	0	20.5	1.6%	0.027	0.004	0.3	0	0.05
C42	CIRCULAR	0.45	7.4	3.5%	0.024	0.005	0.71	0.02	0.12
C48	IRREGULAR	0	47.2	6.6%	0.027	0.012	0.9	0	0.04
CW-5	CIRCULAR	0.6	14.6	1.6%	0.024	0.08	1.17	0.19	0.31
C51	CIRCULAR	0.45	27.3	2.7%	0.024	0.025	0.32	0.1	0.49
C5	CIRCULAR	0.45	8.4	6.8%	0.024	0.088	1.42	0.22	0.42
C52	CIRCULAR	0.45	7.3	5.5%	0.024	0.077	1.45	0.21	0.41
C53	CIRCULAR	0.45	9.5	5.4%	0.024	0.074	1.36	0.21	0.42
C54	CIRCULAR	0.45	6.1	2.8%	0.024	0.075	1.31	0.29	0.4
C55	IRREGULAR	0	40.1	8.3%	0.027	0.08	0.72	0	0.18
C56	IRREGULAR	0	25.8	10.0%	0.027	0.077	0.75	0	0.17
C57	IRREGULAR	0	32.3	4.8%	0.027	0.074	0.69	0.01	0.17
C58	IRREGULAR	0	21.3	3.7%	0.027	0.074	0.79	0.01	0.16
C59	IRREGULAR	0	54.7	7.7%	0.027	0.02	0.33	0	0.2
C60	CIRCULAR	0.4	8.9	7.9%	0.013	0.048	1.38	0.08	0.33
C61	IRREGULAR	0	28.6	9.4%	0.027	0.057	0.61	0.01	0.23
C62	CIRCULAR	0.45	7.3	7.1%	0.024	0.057	1.51	0.14	0.29
C63	IRREGULAR	0	12.1	20.6%	0.027	0.057	1.92	0.01	0.1

1: Irregular cross sections represent road side ditches. Circular and RECT_CLOSED cross sections represent culverts.

2: Geom1 represents culverts diameter.

Table 5-4: Pre-development Scenario- Culverts and Ditches Modelling Summary Output for 100 Year_ 6hr_AES Design Storm

Name	Cross-Section[1]	Geom1 (m)[2]	Length (m)	Slope %	Roughness	Max. |Flow| (m^3/s)	Max. |Velocity| (m/s)	Max/Full Flow	Max/Full Depth
CW-3	CIRCULAR	0.4	29.7	0.6%	0.024	0.062	1.04	0.69	0.5
CW-4	CIRCULAR	0.4	15.0	0.5%	0.024	0.032	0.85	0.41	0.36
DI4	IRREGULAR	0	72.3	0.9%	0.027	0	0	0	0.03
C9	IRREGULAR	0	44.1	1.0%	0.027	0.012	0.19	0	0.09
C11	IRREGULAR	0	43.9	0.9%	0.027	0.07	0.54	0.01	0.14
C12	IRREGULAR	0	131.3	1.6%	0.027	0.125	0.4	0.01	0.24
C13	CIRCULAR	0.45	18.9	0.5%	0.024	0.003	0.33	0.02	0.1
C8	CIRCULAR	0.45	6.0	0.2%	0.024	0.012	0.78	0.16	0.16
C10	IRREGULAR	0	13.5	1.9%	0.027	0.02	0.19	0	0.12
C14	CIRCULAR	0.45	6.9	0.2%	0.024	0.019	0.55	0.31	0.28
C15	IRREGULAR	0	145.7	1.0%	0.027	0.047	0.63	0.01	0.12
C16	IRREGULAR	0	97.4	1.2%	0.027	0.008	0.14	0.01	0.18
C17	CIRCULAR	0.45	10.0	0.9%	0.024	0.016	0.75	0.11	0.21
C18	IRREGULAR	0	66.9	0.1%	0.027	0.017	0.14	0.04	0.3
C19	IRREGULAR	0	131.0	1.4%	0.027	0.038	0.42	0.01	0.2
C20	IRREGULAR	0	281.8	1.7%	0.027	0.117	0.45	0.03	0.42
C22	CIRCULAR	0.45	18.0	1.3%	0.024	0.059	0.92	0.33	0.42
C23	IRREGULAR	0	188.4	1.4%	0.027	0.056	0.45	0.01	0.25
C24	CIRCULAR	0.45	8.6	1.1%	0.024	0.041	0.88	0.26	0.34
C25	CIRCULAR	0.3	8.8	1.6%	0.024	0.084	1.28	1.28	0.88
C21	IRREGULAR	0	158.2	1.3%	0.027	0.01	0.26	0	0.08
C26	CIRCULAR	0.45	17.9	0.4%	0.024	0.014	0.55	0.14	0.23
C27	IRREGULAR	0	269.0	2.0%	0.027	0.052	0.77	0	0.09
C28	IRREGULAR	0	420.4	1.2%	0.027	0.125	0.86	0.01	0.15
C29	IRREGULAR	0	135.1	0.9%	0.027	0.058	0.31	0.01	0.2
C4	IRREGULAR	0	50.7	2.1%	0.027	0.006	0.32	0	0.09
C30	IRREGULAR	0	23.9	2.1%	0.027	0.017	0.34	0	0.13
C31	CIRCULAR	0.45	24.0	2.9%	0.024	0.02	0.98	0.08	0.19
C32	IRREGULAR	0	86.0	0.6%	0.027	0.016	0.17	0.01	0.2
C33	IRREGULAR	0	104.5	0.9%	0.027	0.012	0.14	0.01	0.19
C34	IRREGULAR	0	157.3	2.9%	0.027	0.03	0.33	0.01	0.16
C35	IRREGULAR	0	109.4	1.3%	0.027	0.02	0.49	0	0.09
C36	IRREGULAR	0	91.7	0.9%	0.027	0.016	0.41	0	0.09
CW-1	CIRCULAR	1.2	80.0	2.3%	0.024	0.202	1.26	0.06	0.23
CW-2	RECT_CLOSED	1	42.0	0.9%	0.013	0.23	1.13	0.09	0.22
C38	CIRCULAR	0.45	15.0	3.7%	0.024	0.011	0.62	0.04	0.18
CW-6	CIRCULAR	0.4	27.0	1.6%	0.024	0.011	0.51	0.08	0.24
C43	IRREGULAR	0	14.8	3.8%	0.027	0.023	0.35	0	0.15
C1	CIRCULAR	0.45	15.0	1.3%	0.024	0.029	1.25	0.17	0.2
C37	IRREGULAR	0	47.3	7.0%	0.027	0.029	0.85	0.01	0.13
C41	CIRCULAR	0.45	7.1	3.5%	0.024	0.03	1.33	0.1	0.2
C44	IRREGULAR	0	108.7	6.4%	0.027	0.036	0.32	0.01	0.18
C45	IRREGULAR	0	164.7	4.8%	0.027	0.03	0.63	0	0.1
C46	CIRCULAR	0.45	11.9	5.5%	0.024	0.03	1.08	0.08	0.24
C47	IRREGULAR	0	82.5	3.8%	0.027	0.037	1.03	0	0.08
C3	IRREGULAR	0	13.4	1.4%	0.027	0.084	0.8	0.02	0.19
C7	CIRCULAR	0.45	7.3	0.7%	0.024	0.006	0.5	0.05	0.14
C39	IRREGULAR	0	20.5	1.6%	0.027	0.006	0.31	0	0.06
C42	CIRCULAR	0.45	7.4	3.5%	0.024	0.008	0.71	0.03	0.14
C48	IRREGULAR	0	47.2	6.6%	0.027	0.018	1.01	0	0.04
CW-5	CIRCULAR	0.6	14.6	1.6%	0.024	0.185	1.35	0.45	0.5
C51	CIRCULAR	0.45	27.3	2.7%	0.024	0.041	0.45	0.16	0.55
C5	CIRCULAR	0.45	8.4	6.8%	0.024	0.183	1.64	0.45	0.66
C52	CIRCULAR	0.45	7.3	5.5%	0.024	0.176	1.6	0.48	0.65
C53	CIRCULAR	0.45	9.5	5.4%	0.024	0.174	1.51	0.48	0.68
C54	CIRCULAR	0.45	6.1	2.8%	0.024	0.171	1.46	0.66	0.69
C55	IRREGULAR	0	40.1	8.3%	0.027	0.182	0.77	0.01	0.3
C56	IRREGULAR	0	25.8	10.0%	0.027	0.176	0.8	0.01	0.3
C57	IRREGULAR	0	32.3	4.8%	0.027	0.174	0.71	0.01	0.31
C58	IRREGULAR	0	21.3	3.7%	0.027	0.171	0.79	0.02	0.27
C59	IRREGULAR	0	54.65	7.7%	0.027	0.028	0.35	0	0.32
C60	CIRCULAR	0.4	8.9	7.9%	0.013	0.086	1.51	0.15	0.52
C61	IRREGULAR	0	28.55	9.4%	0.027	0.1	0.64	0.01	0.32
C62	CIRCULAR	0.45	7.3	7.1%	0.024	0.099	1.66	0.24	0.4
C63	IRREGULAR	0	12.1	20.6%	0.027	0.099	2.3	0.01	0.13

1: Irregular cross sections represent road side ditches. Circular and RECT_CLOSED cross sections represent culverts.

2: Geom1 represents culverts diameter.

Table 5-5: Proposed Scenario- Culverts and Ditches Modelling Summary Output for 10 Year_6hr_AES Design Storm

Name	Cross-Section[1]	Geom1 (m)[2]	Length (m)	Slope %	Roughness	Max. |Flow| (m^3/s)	Max. |Velocity| (m/s)	Max/Full Flow	Max/Full Depth
CW-3	CIRCULAR	0.6	39.4	0.7%	0.013	0.035	0.77	0.07	0.28
CW-4	CIRCULAR	0.45	15.3	0.8%	0.013	0.018	1.18	0.07	0.16
DI4	TRAPEZOIDAL	0.7	71.7	1.0%	0.027	0.003	0.08	0	0.06
C9	TRAPEZOIDAL	0.9	44.1	1.0%	0.027	0.009	0.13	0	0.07
C11	TRAPEZOIDAL	0.7	40.5	1.3%	0.027	0.039	0.51	0.01	0.09
C12	TRAPEZOIDAL	0.7	131.5	1.6%	0.027	0.061	0.3	0.01	0.2
C15	TRAPEZOIDAL	0.5	145.3	0.7%	0.027	0.026	0.42	0.02	0.11
C16	TRAPEZOIDAL	0.9	97.3	1.2%	0.027	0.004	0.08	0	0.05
C17	CIRCULAR	0.45	10.0	0.9%	0.013	0.01	0.9	0.04	0.12
C18	TRAPEZOIDAL	0.9	60.7	0.7%	0.027	0.008	0.1	0	0.07
C19	TRAPEZOIDAL	0.5	137.6	1.1%	0.027	0.035	0.48	0.02	0.13
C20	TRAPEZOIDAL	0.5	224.2	2.2%	0.027	0.066	0.52	0.02	0.2
C23	TRAPEZOIDAL	0.5	249.7	1.8%	0.027	0.032	0.61	0.01	0.09
C26	CIRCULAR	0.45	27.6	1.8%	0.013	0.011	0.77	0.03	0.14
C27	TRAPEZOIDAL	0.7	264.6	2.0%	0.027	0.036	0.65	0.01	0.07
C28	TRAPEZOIDAL	0.7	420.5	1.2%	0.027	0.048	0.62	0.01	0.09
C29	TRAPEZOIDAL	0.5	140.6	0.8%	0.027	0.029	0.23	0.02	0.19
C4	TRAPEZOIDAL	0.5	109.6	0.9%	0.027	0.006	0.13	0	0.1
C30	TRAPEZOIDAL	0.5	142.9	1.5%	0.027	0.007	0.07	0	0.23
C32	TRAPEZOIDAL	0.5	60.0	0.2%	0.027	0.011	0.13	0.01	0.15
C33	TRAPEZOIDAL	0.5	105.4	0.4%	0.027	0.006	0.07	0	0.13
C34	TRAPEZOIDAL	0.9	156.9	3.0%	0.027	0.015	0.21	0	0.07
C35	TRAPEZOIDAL	0.5	109.9	0.6%	0.027	0.01	0.25	0.01	0.07
C36	TRAPEZOIDAL	0.5	61.3	0.5%	0.027	0.011	0.28	0.01	0.08
CW-1	CIRCULAR	1.2	80.0	2.3%	0.024	0.12	1.05	0.04	0.17
CW-2	RECT_CLOSED	1	41.1	0.9%	0.013	0.113	0.89	0.04	0.14
CW-6	CIRCULAR	0.45	44.2	1.8%	0.013	0.007	0.55	0.02	0.14
C1	CIRCULAR	0.45	21.9	1.6%	0.013	0.018	1.12	0.05	0.16
C37	IRREGULAR	0	43.8	6.4%	0.027	0.018	0.71	0.01	0.1
C41	CIRCULAR	0.45	7.1	3.5%	0.024	0.017	1.44	0.06	0.13
C44	TRAPEZOIDAL	0.9	108.7	6.4%	0.027	0.017	0.22	0	0.07
C45	TRAPEZOIDAL	0.6	268.0	3.9%	0.027	0.018	0.63	0	0.05
C7	CIRCULAR	0.45	18.9	0.4%	0.024	0.003	0.43	0.03	0.1
C8	CIRCULAR	0.45	27.3	2.0%	0.013	0.02	0.61	0.05	0.26
C14	TRAPEZOIDAL	0.3	185.3	7.1%	0.027	0.015	0.35	0.01	0.16
C22	TRAPEZOIDAL	0.9	145.0	3.1%	0.027	0.094	1.02	0.01	0.08
CW-5	CIRCULAR	0.6	14.6	0.7%	0.013	0.08	1.64	0.16	0.25
C43	CIRCULAR	0.45	11.0	0.6%	0.013	0.004	0.6	0.02	0.09
C48	CIRCULAR	0.45	9.5	8.2%	0.013	0.005	0.94	0.01	0.07
C50	TRAPEZOIDAL	0.7	47.4	5.4%	0.027	0.012	0.59	0	0.03
C51	CIRCULAR	0.3	3.0	35.4%	0.013	0.018	1.05	0.03	0.36
C25	CIRCULAR	0.45	24.8	0.6%	0.013	0.071	0.96	0.33	0.48
C24	TRAPEZOIDAL	0.5	35.5	0.6%	0.027	0.066	0.37	0.06	0.38
C2	CIRCULAR	0.375	11.4	0.4%	0.013	0.048	1.35	0.41	0.36
C31	CIRCULAR	0.45	12.0	11.2%	0.013	0.086	1.8	0.09	0.35
C52	CIRCULAR	0.45	11.5	9.2%	0.013	0.08	1.76	0.09	0.33
C53	CIRCULAR	0.45	14.8	6.2%	0.013	0.074	1.64	0.1	0.37
C54	TRAPEZOIDAL	0.7	34.7	8.5%	0.027	0.08	0.38	0.01	0.21
C55	TRAPEZOIDAL	0.7	25.4	6.4%	0.027	0.08	0.37	0.01	0.23
C56	TRAPEZOIDAL	0.7	29.3	3.9%	0.027	0.074	0.35	0.01	0.22
C57	CIRCULAR	0.45	10.0	3.4%	0.013	0.074	1.6	0.14	0.34
C58	TRAPEZOIDAL	0.7	20.1	2.9%	0.027	0.074	0.41	0.01	0.21
C3	CIRCULAR	0.45	37.8	0.4%	0.013	0.015	0.92	0.08	0.17
C5	TRAPEZOIDAL	0.7	239.1	7.7%	0.027	0.02	0.21	0	0.13
C10	CIRCULAR	0.45	9.8	9.6%	0.013	0.043	1.72	0.05	0.22
C59	TRAPEZOIDAL	0.7	21.4	10.3%	0.027	0.052	0.35	0	0.17
C60	CIRCULAR	0.45	12.3	8.0%	0.013	0.052	1.81	0.06	0.26
C61	TRAPEZOIDAL	0.7	18.1	13.7%	0.027	0.051	1.36	0	0.05
C21	TRAPEZOIDAL	0.3	143.12	1.3%	0.027	0.007	0.15	0.01	0.17

1: Trapezoidal cross sections represent road side Swales. Circular and RECT_CLOSED cross sections represent culverts.

2: Geom1 represents culverts diameter and Swlaes depth. (Swale cross sections; width:1m with 3:1 side slopes)

Table 5-6: Proposed Scenario- Culverts and Ditches Modelling Summary Output for 100 Year_6hr_AES Design Storm

Name	Cross-Section[1]	Geom1 (m)[2]	Length (m)	Slope %	Roughness	Max. |Flow| (m^3/s)	Max. |Velocity| (m/s)	Max/Full Flow	Max/Full Depth
CW-3	CIRCULAR	0.6	39.4	0.7%	0.013	0.06	0.72	0.12	0.4
CW-4	CIRCULAR	0.45	15.3	0.8%	0.013	0.029	1.24	0.11	0.2
DI4	TRAPEZOIDAL	0.7	71.7	1.0%	0.027	0.004	0.09	0	0.07
C9	TRAPEZOIDAL	0.9	44.1	1.0%	0.027	0.014	0.15	0	0.08
C11	TRAPEZOIDAL	0.7	40.5	1.3%	0.027	0.064	0.57	0.01	0.13
C12	TRAPEZOIDAL	0.7	131.5	1.6%	0.027	0.119	0.42	0.02	0.26
C15	TRAPEZOIDAL	0.5	145.3	0.7%	0.027	0.038	0.48	0.02	0.13
C16	TRAPEZOIDAL	0.9	97.3	1.2%	0.027	0.006	0.1	0	0.06
C17	CIRCULAR	0.45	10.0	0.9%	0.013	0.015	1.14	0.05	0.15
C18	TRAPEZOIDAL	0.9	60.7	0.7%	0.027	0.013	0.12	0	0.09
C19	TRAPEZOIDAL	0.5	137.6	1.1%	0.027	0.052	0.54	0.02	0.16
C20	TRAPEZOIDAL	0.5	224.2	2.2%	0.027	0.102	0.59	0.03	0.25
C23	TRAPEZOIDAL	0.5	249.7	1.8%	0.027	0.051	0.7	0.02	0.12
C26	CIRCULAR	0.45	27.6	1.8%	0.013	0.015	0.96	0.04	0.18
C27	TRAPEZOIDAL	0.7	264.6	2.0%	0.027	0.059	0.76	0.01	0.09
C28	TRAPEZOIDAL	0.7	420.5	1.2%	0.027	0.081	0.73	0.02	0.12
C29	TRAPEZOIDAL	0.5	140.6	0.8%	0.027	0.048	0.27	0.03	0.25
C4	TRAPEZOIDAL	0.5	109.6	0.9%	0.027	0.01	0.15	0.01	0.12
C30	TRAPEZOIDAL	0.5	142.9	1.5%	0.027	0.011	0.08	0	0.33
C32	TRAPEZOIDAL	0.5	60.0	0.2%	0.027	0.016	0.15	0.02	0.19
C33	TRAPEZOIDAL	0.5	105.4	0.4%	0.027	0.008	0.08	0.01	0.17
C34	TRAPEZOIDAL	0.9	156.9	3.0%	0.027	0.022	0.26	0	0.09
C35	TRAPEZOIDAL	0.5	109.9	0.6%	0.027	0.014	0.28	0.01	0.09
C36	TRAPEZOIDAL	0.5	61.3	0.5%	0.027	0.016	0.31	0.01	0.1
CW-1	CIRCULAR	1.2	80.0	2.3%	0.024	0.193	1.25	0.06	0.23
CW-2	RECT_CLOSED	1	41.1	0.9%	0.013	0.221	1.12	0.09	0.22
CW-6	CIRCULAR	0.45	44.2	1.8%	0.013	0.015	1.01	0.04	0.17
C1	CIRCULAR	0.45	21.9	1.6%	0.013	0.028	1.23	0.08	0.2
C37	IRREGULAR	0	43.8	6.4%	0.027	0.028	0.81	0.01	0.13
C41	CIRCULAR	0.45	7.1	3.5%	0.024	0.028	1.48	0.1	0.17
C44	TRAPEZOIDAL	0.9	108.7	6.4%	0.027	0.027	0.26	0	0.09
C45	TRAPEZOIDAL	0.6	268.0	3.9%	0.027	0.027	0.72	0	0.06
C7	CIRCULAR	0.45	18.9	0.4%	0.024	0.007	0.54	0.06	0.13
C8	CIRCULAR	0.45	27.3	2.0%	0.013	0.032	0.74	0.08	0.31
C14	TRAPEZOIDAL	0.3	185.3	7.1%	0.027	0.022	0.41	0.01	0.23
C22	TRAPEZOIDAL	0.9	145.0	3.1%	0.027	0.194	1.28	0.01	0.13
CW-5	CIRCULAR	0.6	14.6	0.7%	0.013	0.169	1.73	0.33	0.43
C43	CIRCULAR	0.45	11.0	0.6%	0.013	0.006	0.65	0.03	0.11
C48	CIRCULAR	0.45	9.5	8.2%	0.013	0.009	1.18	0.01	0.1
C50	TRAPEZOIDAL	0.7	47.4	5.4%	0.027	0.018	0.68	0	0.03
C51	CIRCULAR	0.3	3.0	35.4%	0.013	0.028	1.12	0.05	0.55
C25	CIRCULAR	0.45	24.8	0.6%	0.013	0.103	1	0.48	0.63
C24	TRAPEZOIDAL	0.5	35.5	0.6%	0.027	0.104	0.37	0.09	0.51
C2	CIRCULAR	0.375	11.4	0.4%	0.013	0.071	1.35	0.61	0.52
C31	CIRCULAR	0.45	12.0	11.2%	0.013	0.183	1.88	0.19	0.59
C52	CIRCULAR	0.45	11.5	9.2%	0.013	0.173	1.83	0.2	0.6
C53	CIRCULAR	0.45	14.8	6.2%	0.013	0.17	1.74	0.24	0.61
C54	TRAPEZOIDAL	0.7	34.7	8.5%	0.027	0.182	0.41	0.01	0.4
C55	TRAPEZOIDAL	0.7	25.4	6.4%	0.027	0.173	0.39	0.02	0.4
C56	TRAPEZOIDAL	0.7	29.3	3.9%	0.027	0.17	0.38	0.02	0.41
C57	CIRCULAR	0.45	10.0	3.4%	0.013	0.167	1.69	0.32	0.62
C58	TRAPEZOIDAL	0.7	20.1	2.9%	0.027	0.167	0.43	0.02	0.36
C3	CIRCULAR	0.45	37.8	0.4%	0.013	0.021	0.96	0.12	0.21
C5	TRAPEZOIDAL	0.7	239.1	7.7%	0.027	0.028	0.24	0	0.2
C10	CIRCULAR	0.45	9.8	9.6%	0.013	0.08	1.81	0.09	0.34
C59	TRAPEZOIDAL	0.7	21.4	10.3%	0.027	0.094	0.39	0.01	0.23
C60	CIRCULAR	0.45	12.3	8.0%	0.013	0.096	1.87	0.12	0.36
C61	TRAPEZOIDAL	0.7	18.1	13.7%	0.027	0.094	1.68	0.01	0.07
C21	TRAPEZOIDAL	0.3	143.12	1.3%	0.027	0.01	0.16	0.01	0.2

1: Trapezoidal cross sections represent road side Swales. Circular and RECT_CLOSED cross sections represent culverts.

2: Geom1 represents culverts diameter and Swlaes depth. (Swale cross sections; width:1m with 3:1 side slopes)

Table 5-7: Proposed Scenario- PCSWMM Output for 25mm_4hr_Chicago Storm Event

Name[1]	Length (m)	Slope %	Max. |Flow| (m^3/s)	Max. |Velocity| (m/s)
DI4	71.7	0.98%	0.002	0.12
C9	44.1	0.95%	0.005	0.10
C11	40.5	1.29%	0.023	0.45
C12	131.5	1.57%	0.031	0.28
C15	145.3	0.66%	0.018	0.37
C16	97.3	1.19%	0.003	0.10
C18	60.7	0.67%	0.003	0.05
C19	137.6	1.12%	0.025	0.46
C20	224.2	2.17%	0.040	0.54
C23	249.7	1.78%	0.016	0.48
C27	264.6	2.01%	0.018	0.52
C28	420.5	1.17%	0.023	0.49
C29	140.6	0.81%	0.018	0.21
C4	109.6	0.87%	0.004	0.18
C30	142.9	1.48%	0.004	0.11
C32	60.0	0.18%	0.010	0.18
C33	105.4	0.35%	0.004	0.07
C34	156.9	2.96%	0.011	0.28
C35	109.9	0.57%	0.007	0.24
C36	61.3	0.52%	0.009	0.26
C44	108.7	6.42%	0.006	0.12
C45	268.0	3.93%	0.013	0.55
C14	185.3	7.14%	0.012	0.37
C22	145.0	3.06%	0.052	0.84
C49	19.5	3.80%	0.004	0.14
C50	47.4	5.39%	0.010	0.55
C24	35.5	0.59%	0.032	0.33
C54	34.7	8.47%	0.039	0.36
C55	25.4	6.39%	0.038	0.33
C56	29.3	3.86%	0.038	0.31
C58	20.1	2.93%	0.037	0.32
C5	239.1	7.72%	0.014	0.25
C59	21.4	10.33%	0.023	0.32
C61	18.1	13.74%	0.022	1.00
C21	143.1	1.30%	0.005	0.21

1- Proposed BioSwale Trapezoidal cross sections; Bottom width:1m, depth: varies (0.5-0.9m), Z: 3:1

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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WARNING 03: negative offset ignored for Link C37
WARNING 03: negative offset ignored for Link CW-1
WARNING 03: negative offset ignored for Link DI4
WARNING 02: maximum depth increased for Node J10
WARNING 02: maximum depth increased for Node J11
WARNING 02: maximum depth increased for Node J12
```

```
*************
Element Count
*************
Number of rain gages ...... 7
Number of subcatchments ... 101
Number of nodes ........... 87
Number of links ........... 69
Number of pollutants ...... 0
Number of land uses ....... 0
```

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****************
Raingage Summary
****************
                                                 Data       Recording
```

Pre Develpoment- 10-Year Storm Event

Name	Data Source	Type	Interval
100Year_12Hour_AES(Bloor,TRCA)	100Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
100Year_6Hour_AES(Bloor,TRCA)	100Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
10Year_12Hour_AES(Bloor,TRCA)	10Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
10Year_6Hour_AES(Bloor,TRCA)	10Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
25mm-4hr-Chicago	25mm-4hr-Chicago	INTENSITY	10 min.
50Year_12Hour_AES(Bloor,TRCA)	50Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
50Year_6Hour_AES(Bloor,TRCA)	50Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.

****
Subcatchment Summary
****

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
D1	0.25	10.92	1.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J1
D10	0.33	11.58	1.00	1.8000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_1
D11	0.09	7.83	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
D12	0.47	11.03	1.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_2
D13	0.11	5.79	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J25
D14	0.04	5.56	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J48
D15	0.03	6.25	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J37
D16	0.18	11.61	1.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J6
D17	0.06	7.23	1.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J40
D18	0.05	7.04	1.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J39
D19	0.04	7.14	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J38
D2	0.03	5.00	1.00	0.7700	10Year_6Hour_AES(Bloor,TRCA)	J20
D20	0.10	8.33	1.00	0.3000	10Year_6Hour_AES(Bloor,TRCA)	J3
D21	0.05	4.17	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet4
D22	0.08	7.62	1.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J3
D23	0.04	3.33	1.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	Outlet4
D24	0.18	4.80	1.00	4.5000	10Year_6Hour_AES(Bloor,TRCA)	J12
D25	0.18	6.00	1.00	4.5000	10Year_6Hour_AES(Bloor,TRCA)	J53
D27	0.02	4.44	1.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-2
D28	0.01	4.54	1.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J33
D29	0.05	3.13	1.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J28
D3	0.04	3.64	1.00	0.7700	10Year_6Hour_AES(Bloor,TRCA)	J19
D4	0.06	11.54	1.00	0.4000	10Year_6Hour_AES(Bloor,TRCA)	J13
D40	0.03	9.09	1.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet5_1
D41	0.01	4.35	1.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J55
D5	0.08	5.00	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J16
D6	0.07	8.05	1.00	0.4000	10Year_6Hour_AES(Bloor,TRCA)	J7
D7	0.17	10.63	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J30
D8	0.08	5.00	1.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J27
D9	0.13	4.06	1.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J23
EXT1	1.08	83.08	7.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J1
EXT10	0.54	28.42	7.00	16.0000	10Year_6Hour_AES(Bloor,TRCA)	J65
EXT2	0.64	42.67	7.00	1.8000	10Year_6Hour_AES(Bloor,TRCA)	J11
EXT3	0.45	34.62	7.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J11
EXT4	0.10	18.18	7.00	3.0000	10Year_6Hour_AES(Bloor,TRCA)	J10
EXT5	0.24	10.91	7.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J31
EXT6	0.26	15.76	7.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	J34
EXT7	0.82	34.17	7.00	0.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
EXT8	0.60	46.15	7.00	0.2000	10Year_6Hour_AES(Bloor,TRCA)	J35
EXT9	2.59	92.50	7.00	7.3000	10Year_6Hour_AES(Bloor,TRCA)	J26
R1	0.09	11.25	90.00	0.3000	10Year_6Hour_AES(Bloor,TRCA)	J1
R10	0.05	6.67	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
R12	0.03	16.48	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
R13	0.05	3.13	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
R14	0.05	3.13	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J24
R15	0.14	8.75	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
R16	0.06	17.78	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J22
R17_1	0.16	7.62	90.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J31

R17_2	0.05	7.81	90.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J22
R18	0.27	9.47	90.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J22
R19	0.37	8.69	90.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
R2	0.06	7.50	90.00	0.3000	10Year_6Hour_AES(Bloor,TRCA)	J18
R20	0.24	8.04	90.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J51
R21	0.08	8.00	90.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
R22	0.03	6.25	90.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
R23	0.05	6.02	90.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J35
R24	0.14	9.03	90.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J35
R25	0.05	7.04	90.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J40
R26	0.03	5.41	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet3
R27	0.02	13.33	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J42
R28	0.02	14.29	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J6
R29	0.03	5.36	90.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J42
R3	0.11	8.33	90.00	0.6000	10Year_6Hour_AES(Bloor,TRCA)	J10
R30	0.03	5.36	90.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J45
R31	0.03	5.36	90.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J45
R32	0.03	5.36	90.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J42
R33	0.07	7.00	90.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J46
R34	0.06	6.00	90.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J41
R35	0.02	6.90	90.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	OF1
R36	0.15	5.56	90.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J44
R37	0.15	5.00	90.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J50
R38	0.03	6.00	90.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J60
R39	0.14	5.00	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J64
R39_1	0.04	5.97	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J66
R4	0.09	6.82	90.00	0.6000	10Year_6Hour_AES(Bloor,TRCA)	J10
R40_1	0.09	5.08	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R40_3	0.03	4.48	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J66
R40_4	0.06	5.46	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J65
R41_1	0.04	5.33	90.00	3.8000	10Year_6Hour_AES(Bloor,TRCA)	OF4
R41_3	0.03	5.00	90.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J29
R41_4	0.05	5.00	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J36
R41_5	0.12	5.46	90.00	5.7000	10Year_6Hour_AES(Bloor,TRCA)	J26
R42_1	0.08	5.00	90.00	3.2500	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R42_3	0.04	5.33	90.00	3.8000	10Year_6Hour_AES(Bloor,TRCA)	OF4
R42_4	0.11	5.00	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-3
R6	0.02	6.90	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J13
R7	0.02	6.90	90.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	OF2
R8	0.05	8.33	90.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	J8
R9	0.10	7.41	90.00	1.1000	10Year_6Hour_AES(Bloor,TRCA)	J15
S1	0.07	4.67	7.00	3.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
S2	0.08	8.00	7.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-3
SW1	0.03	5.00	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J19
SW10	0.03	2.50	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J46
SW11	0.20	16.67	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
SW2	0.04	3.64	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J17
SW3	0.05	2.94	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
SW4	0.01	1.39	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J37
SW5	0.01	2.08	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J37
SW6	0.01	1.21	95.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J40
SW7	0.01	1.33	95.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J40
SW9	0.02	1.82	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J45

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	260.21	1.50	0.0	
J10	JUNCTION	262.66	0.82	0.0	
J11	JUNCTION	262.28	0.82	0.0	

J12	JUNCTION	257.12	0.58	0.0
J13	JUNCTION	262.94	0.82	0.0
J14	JUNCTION	262.67	0.82	0.0
J15	JUNCTION	264.36	0.74	0.0
J17	JUNCTION	263.22	0.50	0.0
J18	JUNCTION	261.89	0.50	0.0
J19	JUNCTION	262.06	0.50	0.0
J2	JUNCTION	259.42	1.50	0.0
J20	JUNCTION	261.97	0.50	0.0
J21	JUNCTION	264.07	0.70	0.0
J22	JUNCTION	262.09	0.70	0.0
J23	JUNCTION	257.32	0.70	0.0
J24	JUNCTION	264.18	0.95	0.0
J25	JUNCTION	257.95	0.70	0.0
J26	JUNCTION	240.74	0.80	0.0
J27	JUNCTION	262.18	0.70	0.0
J28	JUNCTION	230.87	1.04	0.0
J29	JUNCTION	230.82	0.70	0.0
J3	JUNCTION	261.11	0.58	0.0
J30	JUNCTION	262.15	0.95	0.0
J31	JUNCTION	262.07	0.95	0.0
J32	JUNCTION	230.76	1.04	0.0
J33	JUNCTION	230.43	1.04	0.0
J34	JUNCTION	261.90	0.95	0.0
J35	JUNCTION	261.90	0.95	0.0
J36	JUNCTION	230.17	1.04	0.0
J37	JUNCTION	262.70	0.70	0.0
J38	JUNCTION	261.06	0.70	0.0
J39	JUNCTION	261.75	0.70	0.0
J4	JUNCTION	260.50	0.70	0.0
J40	JUNCTION	262.24	0.70	0.0
J41	JUNCTION	262.03	0.58	0.0
J42	JUNCTION	261.62	0.58	0.0
J43	JUNCTION	257.37	0.58	0.0
J44	JUNCTION	261.92	0.58	0.0
J45	JUNCTION	261.82	1.04	0.0
J46	JUNCTION	262.49	1.04	0.0
J47	JUNCTION	240.17	1.04	0.0
J48	JUNCTION	261.64	0.70	0.0
J49	JUNCTION	261.09	0.70	0.0
J5	JUNCTION	264.10	0.87	0.0
J50	JUNCTION	261.20	1.04	0.0
J51	JUNCTION	260.67	0.70	0.0
J52	JUNCTION	253.33	1.04	0.0
J53	JUNCTION	252.68	1.04	0.0
J54	JUNCTION	230.65	1.00	0.0
J55	JUNCTION	249.42	0.58	0.0
J56	JUNCTION	236.85	1.04	0.0
J57	JUNCTION	236.45	1.04	0.0
J58	JUNCTION	233.89	1.04	0.0
J59	JUNCTION	233.38	1.04	0.0
J6	JUNCTION	260.69	0.95	0.0
J60	JUNCTION	250.16	0.90	0.0
J61	JUNCTION	261.04	1.04	0.0
J62	JUNCTION	231.83	1.04	0.0
J63	JUNCTION	231.66	1.04	0.0
J64	JUNCTION	235.70	0.59	0.0
J65	JUNCTION	231.52	0.60	0.0
J66	JUNCTION	230.82	0.60	0.0
J67	JUNCTION	228.15	0.60	0.0
J68	JUNCTION	227.63	0.60	0.0
J7	JUNCTION	263.47	0.87	0.0
J8	JUNCTION	263.37	0.82	0.0
J82	JUNCTION	261.70	0.50	0.0

J9	JUNCTION	262.95	0.82	0.0
STM-MH-EX	JUNCTION	258.42	4.38	0.0
J16	OUTFALL	262.88	0.74	0.0
OF1	OUTFALL	0.00	0.00	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	225.19	0.59	0.0
OF4	OUTFALL	0.00	0.00	0.0
Outlet1	OUTFALL	258.06	1.00	0.0
Outlet2_1	OUTFALL	256.74	0.95	0.0
Outlet2_2	OUTFALL	257.00	0.95	0.0
Outlet2_3	OUTFALL	257.18	0.30	0.0
Outlet2_4	OUTFALL	257.71	0.45	0.0
Outlet2_5	OUTFALL	0.00	0.00	0.0
Outlet3	OUTFALL	260.20	0.76	0.0
Outlet4	OUTFALL	261.00	0.50	0.0
Outlet5_1	OUTFALL	249.70	0.58	0.0
Outlet5_2	OUTFALL	249.57	1.04	0.0
Outlet6-1	OUTFALL	226.37	0.00	0.0
Outlet6-2	OUTFALL	227.06	1.04	0.0
Outlet6-3	OUTFALL	230.63	1.00	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J18	J82	CONDUIT	15.0	1.2668	0.0240
C10	J13	J14	CONDUIT	13.5	1.9485	0.0270
C11	J10	J11	CONDUIT	43.9	0.8708	0.0270
C12	J11	J1	CONDUIT	131.3	1.5767	0.0270
C13	J7	J8	CONDUIT	18.9	0.5291	0.0240
C14	J14	J10	CONDUIT	6.9	0.1594	0.0240
C15	J15	J16	CONDUIT	145.7	1.0158	0.0270
C16	J17	J19	CONDUIT	97.4	1.1880	0.0270
C17	J19	J20	CONDUIT	10.0	0.9400	0.0240
C18	J20	J18	CONDUIT	66.9	0.1181	0.0270
C19	J21	J27	CONDUIT	131.0	1.4418	0.0270
C2	J2	STM-MH-EX	CONDUIT	3.0	35.3553	0.0130
C20	J22	J23	CONDUIT	281.8	1.6929	0.0270
C21	J24	J30	CONDUIT	158.2	1.2858	0.0270
C22	J25	Outlet2_4	CONDUIT	18.0	1.3335	0.0240
C23	J51	J25	CONDUIT	188.4	1.4439	0.0270
C24	J27	J22	CONDUIT	8.6	1.0736	0.0240
C25	J23	Outlet2_3	CONDUIT	8.8	1.5911	0.0240
C26	J30	J31	CONDUIT	17.9	0.4469	0.0240
C27	J31	Outlet2_1	CONDUIT	269.0	1.9803	0.0270
C28	J34	Outlet2_2	CONDUIT	420.4	1.1656	0.0270
C29	J35	J6	CONDUIT	135.1	0.8955	0.0270
C3	J4	Outlet3	CONDUIT	13.4	1.4181	0.0270
C30	J40	J39	CONDUIT	23.9	2.0515	0.0270
C31	J39	J38	CONDUIT	24.0	2.8887	0.0240
C32	J42	J3	CONDUIT	86.0	0.5932	0.0270
C33	J41	J3	CONDUIT	104.5	0.8803	0.0270
C34	J44	J43	CONDUIT	157.3	2.8964	0.0270
C35	J46	J61	CONDUIT	109.4	1.3258	0.0270
C36	J45	J61	CONDUIT	91.7	0.8510	0.0270
C37	J82	J2	CONDUIT	47.3	4.8259	0.0270
C38	J48	J49	CONDUIT	15.0	3.6758	0.0240
C39	J32	J33	CONDUIT	20.5	1.6384	0.0270
C4	J37	J48	CONDUIT	50.7	2.0797	0.0270
C40	J61	Outlet4	CONDUIT	1.8	2.1983	0.0270
C41	J43	J12	CONDUIT	7.1	3.4528	0.0240
C42	J33	J36	CONDUIT	7.4	3.5428	0.0240

C43	J38	J4	CONDUIT	14.8	3.7764	0.0270
C44	J12	J60	CONDUIT	108.7	6.4161	0.0270
C45	J50	J52	CONDUIT	164.7	4.7838	0.0270
C46	J52	J53	CONDUIT	11.9	5.4704	0.0240
C47	J53	Outlet5_2	CONDUIT	82.5	3.7724	0.0270
C48	J36	Outlet6-2	CONDUIT	47.1	6.6040	0.0270
C5	J26	J47	CONDUIT	8.4	6.7933	0.0240
C50	J55	Outlet5_1	CONDUIT	3.7	-7.4876	0.0270
C51	J60	J55	CONDUIT	27.3	2.7116	0.0240
C52	J56	J57	CONDUIT	7.3	5.5015	0.0240
C53	J58	J59	CONDUIT	9.5	5.3762	0.0240
C54	J62	J63	CONDUIT	6.1	2.7880	0.0240
C55	J47	J56	CONDUIT	40.0	8.3183	0.0270
C56	J57	J58	CONDUIT	25.8	9.9678	0.0270
C57	J59	J62	CONDUIT	32.3	4.8013	0.0270
C58	J63	J28	CONDUIT	21.3	3.7003	0.0270
C59	J64	J65	CONDUIT	54.6	7.6711	0.0270
C6	J54	Outlet6-3	CONDUIT	4.4	0.3378	0.0250
C60	J65	J66	CONDUIT	8.9	7.8896	0.0130
C61	J66	J67	CONDUIT	28.6	9.3932	0.0270
C62	J67	J68	CONDUIT	7.3	7.1414	0.0240
C63	J68	OF3	CONDUIT	12.1	20.5882	0.0270
C7	J29	J32	CONDUIT	7.3	0.7123	0.0240
C8	J9	J13	CONDUIT	6.0	0.2333	0.0240
C9	J8	J9	CONDUIT	44.1	0.9524	0.0270
CW-1	J1	STM-MH-EX	CONDUIT	80.0	2.2381	0.0240
CW-2	STM-MH-EX	Outlet1	CONDUIT	42.0	0.8572	0.0130
CW-3	J6	J4	CONDUIT	29.7	0.6402	0.0240
CW-4	J3	J61	CONDUIT	15.0	0.4657	0.0240
CW-5	J28	J54	CONDUIT	14.6	1.5550	0.0240
CW-6	J49	J51	CONDUIT	27.0	1.5706	0.0240
DI4	J5	J7	CONDUIT	72.3	0.8710	0.0270

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.45	0.16	0.11	0.45	1	0.17
C10	Ditch2	0.82	3.94	0.45	8.53	1	11.99
C11	Ditch2	0.82	3.94	0.45	8.53	1	8.02
C12	Ditch2	0.82	3.94	0.45	8.53	1	10.79
C13	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C14	CIRCULAR	0.45	0.16	0.11	0.45	1	0.06
C15	Ditch4	0.74	2.26	0.43	4.98	1	4.84
C16	Ditch3	0.38	0.88	0.22	3.75	1	1.31
C17	CIRCULAR	0.45	0.16	0.11	0.45	1	0.15
C18	Ditch3	0.38	0.88	0.22	3.75	1	0.41
C19	Ditch5	0.65	1.97	0.33	5.83	1	4.16
C2	CIRCULAR	0.30	0.07	0.07	0.30	1	0.58
C20	Ditch5	0.65	1.97	0.33	5.83	1	4.50
C21	Ditch7	0.95	3.51	0.51	6.28	1	9.46
C22	CIRCULAR	0.45	0.16	0.11	0.45	1	0.18
C23	Ditch5	0.65	1.97	0.33	5.83	1	4.16
C24	CIRCULAR	0.45	0.16	0.11	0.45	1	0.16
C25	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
C26	CIRCULAR	0.45	0.16	0.11	0.45	1	0.10
C27	Ditch7	0.95	3.51	0.51	6.28	1	11.74
C28	Ditch7	0.95	3.51	0.51	6.28	1	9.01
C29	Ditch7	0.95	3.51	0.51	6.28	1	7.89
C3	Ditch5	0.65	1.97	0.33	5.83	1	4.12
C30	Ditch5	0.65	1.97	0.33	5.83	1	4.96

C31	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
C32	Ditch8	0.58	1.28	0.36	3.38	1	1.85
C33	Ditch8	0.58	1.28	0.36	3.38	1	2.25
C34	Ditch8	0.58	1.28	0.36	3.38	1	4.08
C35	Ditch9	1.04	2.75	0.43	5.96	1	6.74
C36	Ditch9	1.04	2.75	0.43	5.96	1	5.40
C37	Ditch3	0.38	0.88	0.22	3.75	1	2.64
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.30
C39	Ditch9	1.04	2.75	0.43	5.96	1	7.49
C4	Ditch5	0.65	1.97	0.33	5.83	1	4.99
C40	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	2.31
C41	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C42	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C43	Ditch5	0.65	1.97	0.33	5.83	1	6.73
C44	Ditch8	0.58	1.28	0.36	3.38	1	6.07
C45	Ditch9	1.04	2.75	0.43	5.96	1	12.80
C46	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C47	Ditch9	1.04	2.75	0.43	5.96	1	11.37
C48	Ditch9	1.04	2.75	0.43	5.96	1	15.04
C5	CIRCULAR	0.45	0.16	0.11	0.45	1	0.40
C50	Ditch8	0.58	1.28	0.36	3.38	1	6.56
C51	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
C52	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C53	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C54	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
C55	Ditch9	1.04	2.75	0.43	5.96	1	16.88
C56	Ditch9	1.04	2.75	0.43	5.96	1	18.48
C57	Ditch9	1.04	2.75	0.43	5.96	1	12.82
C58	Ditch9	1.04	2.75	0.43	5.96	1	11.26
C59	Ditch11	0.59	1.24	0.35	3.38	1	6.30
C6	TRAPEZOIDAL	1.00	2.50	0.50	4.50	1	3.68
C60	CIRCULAR	0.40	0.13	0.10	0.40	1	0.59
C61	Ditch11	0.59	1.24	0.35	3.38	1	6.97
C62	CIRCULAR	0.45	0.16	0.11	0.45	1	0.41
C63	Ditch11	0.59	1.24	0.35	3.38	1	10.32
C7	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C8	CIRCULAR	0.45	0.16	0.11	0.45	1	0.07
C9	Ditch2	0.82	3.94	0.45	8.53	1	8.38
CW-1	CIRCULAR	1.20	1.13	0.30	1.20	1	3.16
CW-2	RECT_CLOSED	1.00	0.92	0.24	0.92	1	2.51
CW-3	CIRCULAR	0.40	0.13	0.10	0.40	1	0.09
CW-4	CIRCULAR	0.40	0.13	0.10	0.40	1	0.08
CW-5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.41
CW-6	CIRCULAR	0.40	0.13	0.10	0.40	1	0.14
DI4	Ditch1	0.87	2.77	0.48	5.46	1	5.89

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Transect Summary
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Transect Ditch1
Area:

0.0016	0.0062	0.0123	0.0191	0.0265
0.0346	0.0432	0.0525	0.0625	0.0730
0.0842	0.0960	0.1084	0.1214	0.1351
0.1494	0.1643	0.1798	0.1960	0.2128
0.2302	0.2482	0.2669	0.2862	0.3061
0.3266	0.3478	0.3696	0.3920	0.4150
0.4387	0.4630	0.4879	0.5134	0.5396
0.5664	0.5937	0.6217	0.6503	0.6795
0.7093	0.7397	0.7708	0.8024	0.8346
0.8671	0.8999	0.9329	0.9663	1.0000

Hrad:

0.0180	0.0387	0.0679	0.0957	0.1216
0.1462	0.1697	0.1924	0.2143	0.2357
0.2566	0.2770	0.2972	0.3170	0.3366
0.3559	0.3751	0.3941	0.4129	0.4316
0.4502	0.4687	0.4871	0.5054	0.5236
0.5418	0.5598	0.5779	0.5958	0.6137
0.6316	0.6495	0.6672	0.6850	0.7028
0.7209	0.7389	0.7569	0.7749	0.7928
0.8107	0.8286	0.8464	0.8642	0.8868
0.9131	0.9392	0.9652	0.9910	1.0000

Width:

0.0915	0.1662	0.1887	0.2069	0.2250
0.2432	0.2614	0.2796	0.2978	0.3159
0.3341	0.3523	0.3705	0.3887	0.4068
0.4250	0.4432	0.4614	0.4796	0.4978
0.5159	0.5341	0.5523	0.5705	0.5887
0.6068	0.6250	0.6432	0.6614	0.6796
0.6977	0.7159	0.7341	0.7523	0.7703
0.7881	0.8058	0.8234	0.8411	0.8587
0.8763	0.8940	0.9116	0.9292	0.9417
0.9501	0.9584	0.9668	0.9752	1.0000

Transect Ditch10

Area:

0.0007	0.0027	0.0061	0.0101	0.0147
0.0198	0.0252	0.0312	0.0375	0.0462
0.0637	0.0817	0.1002	0.1193	0.1389
0.1590	0.1797	0.2007	0.2218	0.2431
0.2645	0.2861	0.3078	0.3297	0.3518
0.3741	0.3965	0.4191	0.4418	0.4648
0.4878	0.5111	0.5345	0.5581	0.5819
0.6058	0.6299	0.6542	0.6787	0.7033
0.7294	0.7569	0.7850	0.8135	0.8424
0.8718	0.9017	0.9322	0.9653	1.0000

Hrad:

0.0194	0.0369	0.0623	0.0893	0.1172
0.1435	0.1685	0.1925	0.2157	0.1087
0.1379	0.1716	0.2045	0.2365	0.2678
0.2984	0.3284	0.3627	0.3974	0.4309
0.4636	0.4958	0.5276	0.5590	0.5900
0.6207	0.6509	0.6808	0.7104	0.7396
0.7685	0.7970	0.8253	0.8533	0.8809
0.9083	0.9355	0.9623	0.9889	1.0153
0.9569	0.9754	0.9939	1.0122	1.0305
1.0488	1.0670	1.0537	1.0308	1.0000

Width:

0.0365	0.0786	0.1043	0.1216	0.1338
0.1461	0.1584	0.1707	0.1830	0.4550
0.4939	0.5086	0.5232	0.5379	0.5526
0.5673	0.5819	0.5865	0.5892	0.5932
0.5979	0.6026	0.6073	0.6120	0.6167
0.6214	0.6260	0.6307	0.6354	0.6401
0.6448	0.6495	0.6542	0.6588	0.6635
0.6682	0.6729	0.6776	0.6823	0.6870
0.7603	0.7732	0.7862	0.7991	0.8120
0.8250	0.8379	0.8789	0.9330	1.0000

Transect Ditch11

Area:

0.0011	0.0042	0.0092	0.0154	0.0221
0.0293	0.0369	0.0450	0.0536	0.0627
0.0722	0.0823	0.0928	0.1038	0.1153
0.1273	0.1399	0.1530	0.1666	0.1807

0.1953 0.2105 0.2272 0.2476 0.2696
0.2926 0.3178 0.3449 0.3722 0.3997
0.4275 0.4555 0.4838 0.5123 0.5410
0.5700 0.5992 0.6286 0.6582 0.6881
0.7183 0.7486 0.7792 0.8101 0.8411
0.8724 0.9040 0.9358 0.9678 1.0000

Hrad:

0.0169 0.0347 0.0522 0.0799 0.1061
0.1308 0.1543 0.1769 0.1986 0.2196
0.2401 0.2600 0.2790 0.2973 0.3154
0.3332 0.3509 0.3684 0.3858 0.4031
0.4202 0.4372 0.3938 0.3754 0.3892
0.4032 0.3854 0.4144 0.4432 0.4717
0.5000 0.5280 0.5559 0.5835 0.6109
0.6381 0.6651 0.6919 0.7185 0.7450
0.7712 0.7973 0.8232 0.8489 0.8745
0.8999 0.9252 0.9503 0.9752 1.0000

Width:

0.0661 0.1260 0.1837 0.1995 0.2141
0.2288 0.2435 0.2582 0.2728 0.2875
0.3022 0.3168 0.3323 0.3483 0.3643
0.3802 0.3962 0.4122 0.4281 0.4441
0.4601 0.4761 0.5761 0.6622 0.6961
0.7301 0.8334 0.8407 0.8479 0.8551
0.8624 0.8696 0.8769 0.8841 0.8914
0.8986 0.9058 0.9131 0.9203 0.9276
0.9348 0.9421 0.9493 0.9565 0.9638
0.9710 0.9783 0.9855 0.9928 1.0000

Transect Ditch2

Area:

0.0012 0.0049 0.0096 0.0149 0.0210
0.0277 0.0350 0.0431 0.0518 0.0611
0.0712 0.0819 0.0933 0.1053 0.1181
0.1315 0.1456 0.1603 0.1757 0.1918
0.2085 0.2259 0.2439 0.2626 0.2819
0.3018 0.3224 0.3437 0.3655 0.3881
0.4115 0.4357 0.4608 0.4867 0.5134
0.5409 0.5693 0.5985 0.6285 0.6594
0.6910 0.7234 0.7565 0.7904 0.8247
0.8593 0.8941 0.9291 0.9644 1.0000

Hrad:

0.0164 0.0408 0.0690 0.0947 0.1187
0.1415 0.1634 0.1846 0.2054 0.2257
0.2457 0.2654 0.2849 0.3042 0.3234
0.3424 0.3614 0.3802 0.3989 0.4176
0.4372 0.4563 0.4752 0.4940 0.5128
0.5315 0.5501 0.5687 0.5872 0.6028
0.6169 0.6312 0.6458 0.6606 0.6755
0.6907 0.7060 0.7214 0.7370 0.7538
0.7713 0.7888 0.8063 0.8251 0.8547
0.8841 0.9133 0.9424 0.9713 1.0000

Width:

0.0713 0.1218 0.1406 0.1594 0.1782
0.1970 0.2158 0.2346 0.2534 0.2722
0.2911 0.3099 0.3287 0.3475 0.3663
0.3851 0.4039 0.4227 0.4415 0.4603
0.4778 0.4958 0.5139 0.5321 0.5502
0.5683 0.5864 0.6046 0.6227 0.6441
0.6674 0.6906 0.7139 0.7372 0.7605
0.7837 0.8070 0.8303 0.8536 0.8755
0.8967 0.9179 0.9390 0.9587 0.9656
0.9725 0.9794 0.9862 0.9931 1.0000

Transect Ditch3
Area:

0.0017	0.0053	0.0108	0.0182	0.0266
0.0355	0.0451	0.0551	0.0657	0.0769
0.0886	0.1009	0.1137	0.1271	0.1410
0.1555	0.1705	0.1861	0.2023	0.2190
0.2363	0.2542	0.2730	0.2925	0.3128
0.3339	0.3557	0.3784	0.4018	0.4260
0.4509	0.4766	0.5030	0.5296	0.5566
0.5838	0.6114	0.6393	0.6675	0.6960
0.7249	0.7542	0.7837	0.8136	0.8438
0.8744	0.9053	0.9365	0.9681	1.0000

Hrad:

0.0212	0.0392	0.0565	0.0753	0.1029
0.1291	0.1542	0.1783	0.2016	0.2243
0.2464	0.2680	0.2891	0.3098	0.3302
0.3502	0.3699	0.3894	0.4087	0.4277
0.4466	0.4605	0.4741	0.4879	0.5019
0.5162	0.5308	0.5457	0.5607	0.5758
0.5910	0.6063	0.6291	0.6537	0.6780
0.7017	0.7244	0.7468	0.7690	0.7910
0.8127	0.8343	0.8556	0.8767	0.8977
0.9185	0.9391	0.9596	0.9799	1.0000

Width:

0.0839	0.1424	0.2010	0.2532	0.2705
0.2877	0.3050	0.3222	0.3395	0.3567
0.3740	0.3912	0.4085	0.4257	0.4430
0.4604	0.4779	0.4953	0.5128	0.5302
0.5477	0.5716	0.5962	0.6207	0.6453
0.6698	0.6940	0.7181	0.7421	0.7662
0.7902	0.8143	0.8267	0.8356	0.8446
0.8540	0.8645	0.8749	0.8853	0.8957
0.9062	0.9166	0.9270	0.9374	0.9479
0.9583	0.9687	0.9791	0.9896	1.0000

Transect Ditch4
Area:

0.0026	0.0072	0.0124	0.0184	0.0251
0.0324	0.0405	0.0493	0.0588	0.0690
0.0799	0.0915	0.1038	0.1168	0.1305
0.1448	0.1599	0.1757	0.1923	0.2095
0.2276	0.2464	0.2658	0.2858	0.3064
0.3275	0.3493	0.3716	0.3945	0.4180
0.4421	0.4667	0.4920	0.5178	0.5442
0.5712	0.5988	0.6270	0.6558	0.6852
0.7152	0.7458	0.7768	0.8080	0.8395
0.8711	0.9030	0.9351	0.9675	1.0000

Hrad:

0.0209	0.0491	0.0744	0.0976	0.1194
0.1402	0.1603	0.1798	0.1988	0.2175
0.2359	0.2542	0.2723	0.2903	0.3080
0.3257	0.3431	0.3597	0.3762	0.3927
0.4092	0.4258	0.4455	0.4650	0.4843
0.5034	0.5223	0.5411	0.5598	0.5783
0.5967	0.6150	0.6332	0.6512	0.6687
0.6862	0.7036	0.7210	0.7383	0.7556
0.7728	0.7909	0.8176	0.8441	0.8705
0.8967	0.9227	0.9486	0.9744	1.0000

Width:

0.1288	0.1504	0.1719	0.1935	0.2151
0.2367	0.2582	0.2798	0.3014	0.3229
0.3445	0.3658	0.3871	0.4084	0.4297
0.4510	0.4725	0.4952	0.5180	0.5407
0.5635	0.5860	0.6038	0.6216	0.6393

```
            0.6571     0.6748     0.6926     0.7103     0.7281
            0.7458     0.7636     0.7813     0.7992     0.8176
            0.8361     0.8545     0.8729     0.8913     0.9098
            0.9282     0.9456     0.9524     0.9592     0.9660
            0.9728     0.9796     0.9864     0.9932     1.0000

Transect Ditch5
Area:
            0.0007     0.0027     0.0060     0.0106     0.0163
            0.0229     0.0301     0.0381     0.0466     0.0559
            0.0659     0.0765     0.0878     0.0997     0.1124
            0.1257     0.1397     0.1544     0.1697     0.1857
            0.2024     0.2197     0.2376     0.2562     0.2755
            0.2954     0.3159     0.3371     0.3590     0.3815
            0.4047     0.4285     0.4531     0.4785     0.5048
            0.5319     0.5599     0.5888     0.6185     0.6492
            0.6806     0.7129     0.7461     0.7802     0.8151
            0.8509     0.8873     0.9242     0.9618     1.0000
Hrad:
            0.0195     0.0390     0.0592     0.0796     0.1021
            0.1289     0.1543     0.1787     0.2023     0.2252
            0.2476     0.2696     0.2913     0.3127     0.3338
            0.3548     0.3756     0.3962     0.4171     0.4381
            0.4588     0.4794     0.4999     0.5204     0.5407
            0.5609     0.5811     0.6012     0.6212     0.6412
            0.6611     0.6810     0.6956     0.7103     0.7252
            0.7405     0.7559     0.7716     0.7875     0.8036
            0.8199     0.8363     0.8528     0.8693     0.8859
            0.9067     0.9302     0.9536     0.9769     1.0000
Width:
            0.0348     0.0695     0.1028     0.1344     0.1618
            0.1794     0.1969     0.2145     0.2321     0.2496
            0.2672     0.2847     0.3023     0.3198     0.3374
            0.3549     0.3725     0.3901     0.4071     0.4240
            0.4410     0.4579     0.4749     0.4918     0.5087
            0.5257     0.5426     0.5596     0.5765     0.5935
            0.6104     0.6274     0.6495     0.6719     0.6943
            0.7167     0.7391     0.7616     0.7840     0.8064
            0.8288     0.8512     0.8737     0.8963     0.9190
            0.9375     0.9531     0.9687     0.9844     1.0000

Transect Ditch6
Area:
            0.0027     0.0089     0.0159     0.0235     0.0319
            0.0409     0.0507     0.0612     0.0724     0.0843
            0.0970     0.1103     0.1243     0.1391     0.1546
            0.1707     0.1873     0.2044     0.2220     0.2401
            0.2587     0.2777     0.2973     0.3173     0.3378
            0.3588     0.3802     0.4022     0.4246     0.4476
            0.4710     0.4949     0.5194     0.5442     0.5693
            0.5946     0.6203     0.6464     0.6731     0.7002
            0.7278     0.7558     0.7843     0.8133     0.8428
            0.8727     0.9033     0.9347     0.9670     1.0000
Hrad:
            0.0161     0.0463     0.0740     0.0997     0.1239
            0.1470     0.1691     0.1906     0.2114     0.2317
            0.2517     0.2713     0.2906     0.3097     0.3285
            0.3505     0.3732     0.3956     0.4177     0.4394
            0.4608     0.4820     0.5030     0.5237     0.5442
            0.5645     0.5846     0.6046     0.6244     0.6441
            0.6636     0.6830     0.7014     0.7275     0.7534
            0.7775     0.7967     0.8158     0.8348     0.8537
            0.8726     0.8914     0.9101     0.9288     0.9474
            0.9639     0.9723     0.9811     0.9904     1.0000
```

Width:

0.1730	0.1966	0.2179	0.2392	0.2605
0.2818	0.3031	0.3244	0.3457	0.3670
0.3883	0.4096	0.4309	0.4522	0.4735
0.4898	0.5043	0.5188	0.5333	0.5478
0.5624	0.5769	0.5914	0.6059	0.6204
0.6349	0.6494	0.6639	0.6785	0.6930
0.7075	0.7220	0.7380	0.7453	0.7527
0.7617	0.7757	0.7897	0.8037	0.8177
0.8317	0.8457	0.8597	0.8737	0.8877
0.9037	0.9278	0.9519	0.9759	1.0000

Transect Ditch7

Area:

0.0018	0.0059	0.0107	0.0162	0.0224
0.0293	0.0369	0.0453	0.0544	0.0642
0.0747	0.0859	0.0979	0.1105	0.1239
0.1380	0.1529	0.1684	0.1847	0.2017
0.2194	0.2378	0.2570	0.2768	0.2974
0.3188	0.3408	0.3636	0.3870	0.4112
0.4362	0.4618	0.4881	0.5152	0.5429
0.5711	0.5995	0.6283	0.6574	0.6869
0.7166	0.7468	0.7772	0.8080	0.8391
0.8706	0.9024	0.9345	0.9669	1.0000

Hrad:

0.0184	0.0490	0.0759	0.1005	0.1236
0.1456	0.1669	0.1876	0.2078	0.2277
0.2473	0.2667	0.2858	0.3049	0.3238
0.3425	0.3611	0.3797	0.3982	0.4166
0.4350	0.4533	0.4716	0.4898	0.5081
0.5263	0.5444	0.5626	0.5807	0.5988
0.6169	0.6353	0.6543	0.6731	0.6912
0.7158	0.7401	0.7641	0.7878	0.8112
0.8343	0.8571	0.8797	0.9020	0.9241
0.9460	0.9677	0.9891	1.0104	1.0000

Width:

0.1084	0.1294	0.1505	0.1715	0.1925
0.2136	0.2346	0.2557	0.2767	0.2978
0.3188	0.3399	0.3609	0.3820	0.4030
0.4241	0.4453	0.4665	0.4876	0.5088
0.5299	0.5511	0.5722	0.5934	0.6145
0.6357	0.6568	0.6780	0.6991	0.7203
0.7414	0.7622	0.7821	0.8066	0.8194
0.8292	0.8390	0.8488	0.8586	0.8684
0.8782	0.8880	0.8978	0.9076	0.9174
0.9272	0.9370	0.9468	0.9566	1.0000

Transect Ditch8

Area:

0.0023	0.0092	0.0192	0.0298	0.0409
0.0525	0.0644	0.0768	0.0896	0.1029
0.1167	0.1310	0.1458	0.1610	0.1768
0.1930	0.2097	0.2270	0.2446	0.2628
0.2815	0.3007	0.3203	0.3405	0.3611
0.3821	0.4035	0.4253	0.4474	0.4699
0.4928	0.5161	0.5397	0.5638	0.5882
0.6130	0.6382	0.6638	0.6897	0.7161
0.7428	0.7699	0.7974	0.8253	0.8536
0.8822	0.9112	0.9405	0.9700	1.0000

Hrad:

0.0160	0.0324	0.0596	0.0874	0.1138
0.1406	0.1664	0.1915	0.2146	0.2370
0.2588	0.2801	0.3009	0.3213	0.3414
0.3611	0.3805	0.3996	0.4184	0.4370

```
            0.4554     0.4737     0.4917     0.5095     0.5272
            0.5492     0.5707     0.5911     0.6114     0.6315
            0.6514     0.6712     0.6908     0.7104     0.7298
            0.7491     0.7682     0.7873     0.8062     0.8251
            0.8439     0.8625     0.8811     0.8996     0.9181
            0.9366     0.9575     0.9783     0.9989     1.0000
Width:
            0.1514     0.2983     0.3357     0.3537     0.3718
            0.3847     0.3977     0.4107     0.4264     0.4423
            0.4582     0.4742     0.4901     0.5061     0.5220
            0.5379     0.5539     0.5698     0.5858     0.6017
            0.6177     0.6336     0.6495     0.6655     0.6814
            0.6923     0.7036     0.7161     0.7286     0.7411
            0.7536     0.7662     0.7787     0.7912     0.8037
            0.8163     0.8288     0.8413     0.8538     0.8663
            0.8789     0.8914     0.9039     0.9164     0.9290
            0.9413     0.9509     0.9605     0.9701     1.0000

Transect Ditch9
Area:
            0.0023     0.0054     0.0092     0.0137     0.0189
            0.0249     0.0316     0.0390     0.0471     0.0560
            0.0656     0.0759     0.0870     0.0987     0.1112
            0.1245     0.1384     0.1531     0.1685     0.1846
            0.2015     0.2191     0.2375     0.2566     0.2764
            0.2970     0.3184     0.3404     0.3633     0.3869
            0.4113     0.4364     0.4624     0.4891     0.5168
            0.5452     0.5740     0.6034     0.6331     0.6633
            0.6940     0.7252     0.7569     0.7890     0.8216
            0.8546     0.8881     0.9221     0.9589     1.0000
Hrad:
            0.0403     0.0725     0.1008     0.1272     0.1524
            0.1768     0.2006     0.2241     0.2473     0.2703
            0.2932     0.3158     0.3384     0.3609     0.3834
            0.4057     0.4281     0.4503     0.4724     0.4943
            0.5162     0.5382     0.5601     0.5820     0.6039
            0.6257     0.6471     0.6686     0.6901     0.7116
            0.7332     0.7544     0.7753     0.7964     0.8115
            0.8426     0.8735     0.9041     0.9344     0.9643
            0.9939     1.0234     1.0526     1.0816     1.1104
            1.1391     1.1676     1.1830     1.1057     1.0000
Width:
            0.0597     0.0758     0.0919     0.1079     0.1240
            0.1401     0.1562     0.1722     0.1883     0.2044
            0.2205     0.2365     0.2526     0.2687     0.2848
            0.3008     0.3169     0.3330     0.3492     0.3656
            0.3819     0.3983     0.4147     0.4311     0.4474
            0.4640     0.4808     0.4976     0.5144     0.5313
            0.5481     0.5653     0.5827     0.6002     0.6234
            0.6336     0.6438     0.6540     0.6641     0.6745
            0.6849     0.6953     0.7057     0.7162     0.7266
            0.7370     0.7474     0.7668     0.8596     1.0000


*********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*********************************************************

***************
Analysis Options
***************
Flow Units ..............  CMS
```

```
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 09/20/2021 00:00:00
Ending Date .............. 09/21/2021 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:00:10
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 1.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         0.824        55.690
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.370        24.966
Surface Runoff ...........         0.428        28.886
Final Storage ............         0.028         1.886
Continuity Error (%) .....        -0.087


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.428         4.275
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         0.427         4.267
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.003
Continuity Error (%) .....         0.138


*************************
Highest Continuity Errors
*************************
Node J55 (5.47%)


***************************
Time-Step Critical Elements
***************************
Link C40 (2.03%)
```

****
Highest Flow Instability Indexes
****
Link C50 (22)
Link C5 (10)
Link C55 (8)
Link C56 (7)
Link CW-5 (6)

****
Routing Time Step Summary
****

Minimum Time Step	:	0.50 sec
Average Time Step	:	1.00 sec
Maximum Time Step	:	1.00 sec
Percent in Steady State	:	-0.00
Average Iterations per Step	:	2.00
Percent Not Converging	:	0.00
Time Step Frequencies	:	
1.000 - 0.871 sec	:	100.00 %
0.871 - 0.758 sec	:	0.00 %
0.758 - 0.660 sec	:	0.00 %
0.660 - 0.574 sec	:	0.00 %
0.574 - 0.500 sec	:	0.00 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Tota Runof 10^6 l
D1	55.69	0.00	0.00	36.16	0.54	15.27	15.81	0.0
D10	55.69	0.00	0.00	36.16	0.54	16.68	17.22	0.0
D11	55.69	0.00	0.00	36.13	0.54	17.76	18.31	0.0
D12	55.69	0.00	0.00	36.16	0.54	15.26	15.80	0.0
D13	55.69	0.00	0.00	36.16	0.54	16.90	17.45	0.0
D14	55.69	0.00	0.00	35.52	0.54	18.38	18.92	0.0
D15	55.69	0.00	0.00	35.14	0.54	18.78	19.33	0.0
D16	55.69	0.00	0.00	36.16	0.54	16.95	17.50	0.0
D17	55.69	0.00	0.00	35.94	0.54	17.98	18.52	0.0
D18	55.69	0.00	0.00	35.72	0.54	18.18	18.73	0.0
D19	55.69	0.00	0.00	35.28	0.54	18.64	19.19	0.0
D2	55.69	0.00	0.00	35.47	0.54	18.44	18.98	0.0
D20	55.69	0.00	0.00	36.16	0.54	16.62	17.16	0.0
D21	55.69	0.00	0.00	36.16	0.54	17.70	18.24	0.0
D22	55.69	0.00	0.00	36.16	0.54	17.63	18.17	0.0
D23	55.69	0.00	0.00	35.91	0.54	17.99	18.54	0.0
D24	55.69	0.00	0.00	36.16	0.54	17.04	17.58	0.0
D25	55.69	0.00	0.00	36.16	0.54	17.44	17.98	0.0
D27	55.69	0.00	0.00	34.53	0.54	19.40	19.94	0.0
D28	55.69	0.00	0.00	34.48	0.54	19.47	20.02	0.0
D29	55.69	0.00	0.00	35.36	0.54	18.57	19.11	0.0
D3	55.69	0.00	0.00	36.16	0.54	17.63	18.18	0.0
D4	55.69	0.00	0.00	35.69	0.54	18.22	18.77	0.0
D40	55.69	0.00	0.00	34.64	0.54	19.28	19.83	0.0
D41	55.69	0.00	0.00	34.51	0.54	19.45	20.00	0.0
D5	55.69	0.00	0.00	36.16	0.54	17.22	17.77	0.0
D6	55.69	0.00	0.00	36.16	0.54	17.48	18.03	0.0
D7	55.69	0.00	0.00	36.16	0.54	17.22	17.77	0.0

Pre Develpoment- 10-Year Storm Event

D8	55.69	0.00	0.00	36.16	0.54	17.57	18.11	0.0
D9	55.69	0.00	0.00	36.16	0.54	16.23	16.78	0.0
EXT1	55.69	0.00	0.00	33.76	3.80	16.88	20.68	0.2
EXT10	55.69	0.00	0.00	32.96	3.80	17.70	21.51	0.1
EXT2	55.69	0.00	0.00	33.84	3.80	16.81	20.61	0.1
EXT3	55.69	0.00	0.00	33.97	3.80	16.05	19.85	0.0
EXT4	55.69	0.00	0.00	32.67	3.80	17.98	21.78	0.0
EXT5	55.69	0.00	0.00	33.97	3.80	14.60	18.40	0.0
EXT6	55.69	0.00	0.00	33.97	3.80	16.44	20.24	0.0
EXT7	55.69	0.00	0.00	33.97	3.80	13.65	17.46	0.1
EXT8	55.69	0.00	0.00	33.97	3.80	15.16	18.96	0.1
EXT9	55.69	0.00	0.00	33.73	3.80	16.91	20.71	0.5
R1	55.69	0.00	0.00	1.74	48.87	3.46	52.33	0.0
R10	55.69	0.00	0.00	1.74	48.90	3.48	52.38	0.0
R12	55.69	0.00	0.00	1.74	48.91	3.50	52.41	0.0
R13	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R14	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R15	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R16	55.69	0.00	0.00	1.74	48.92	3.50	52.41	0.0
R17_1	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R17_2	55.69	0.00	0.00	1.74	48.91	3.49	52.40	0.0
R18	55.69	0.00	0.00	1.74	48.85	3.45	52.30	0.1
R19	55.69	0.00	0.00	1.74	48.81	3.43	52.24	0.1
R2	55.69	0.00	0.00	1.74	48.87	3.46	52.33	0.0
R20	55.69	0.00	0.00	1.74	48.83	3.44	52.28	0.1
R21	55.69	0.00	0.00	1.74	48.89	3.48	52.36	0.0
R22	55.69	0.00	0.00	1.74	48.91	3.49	52.41	0.0
R23	55.69	0.00	0.00	1.74	48.88	3.47	52.36	0.0
R24	55.69	0.00	0.00	1.74	48.85	3.46	52.31	0.0
R25	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R26	55.69	0.00	0.00	1.74	48.91	3.49	52.39	0.0
R27	55.69	0.00	0.00	1.74	48.90	3.51	52.41	0.0
R28	55.69	0.00	0.00	1.74	48.90	3.51	52.40	0.0
R29	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R3	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R30	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R31	55.69	0.00	0.00	1.74	48.89	3.48	52.36	0.0
R32	55.69	0.00	0.00	1.74	48.89	3.48	52.36	0.0
R33	55.69	0.00	0.00	1.74	48.87	3.47	52.33	0.0
R34	55.69	0.00	0.00	1.74	48.87	3.47	52.33	0.0
R35	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R36	55.69	0.00	0.00	1.74	48.87	3.47	52.33	0.0
R37	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R38	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R39	55.69	0.00	0.00	1.74	48.88	3.47	52.35	0.0
R39_1	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R4	55.69	0.00	0.00	1.74	48.86	3.46	52.32	0.0
R40_1	55.69	0.00	0.00	1.74	48.90	3.48	52.38	0.0
R40_3	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R40_4	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_1	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_3	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_4	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_5	55.69	0.00	0.00	1.74	48.89	3.48	52.36	0.0
R42_1	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R42_3	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R42_4	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R6	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R7	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R8	55.69	0.00	0.00	1.74	48.91	3.49	52.40	0.0
R9	55.69	0.00	0.00	1.74	48.87	3.47	52.34	0.0
S1	55.69	0.00	0.00	33.50	3.80	17.13	20.93	0.0
S2	55.69	0.00	0.00	33.97	3.80	16.48	20.28	0.0
SW1	55.69	0.00	0.00	0.87	51.62	1.75	53.37	0.0

SW10	55.69	0.00	0.00	0.87	51.59	1.74	53.33	0.0
SW11	55.69	0.00	0.00	0.87	51.59	1.74	53.34	0.1
SW2	55.69	0.00	0.00	0.87	51.59	1.74	53.34	0.0
SW3	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
SW4	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
SW5	55.69	0.00	0.00	0.87	51.63	1.75	53.38	0.0
SW6	55.69	0.00	0.00	0.87	51.60	1.74	53.34	0.0
SW7	55.69	0.00	0.00	0.87	51.60	1.75	53.35	0.0
SW9	55.69	0.00	0.00	0.87	51.59	1.74	53.34	0.0

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Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J1	JUNCTION	0.04	0.21	260.42	0 02:26	0.21
J10	JUNCTION	0.01	0.08	262.75	0 02:30	0.08
J11	JUNCTION	0.02	0.09	262.37	0 02:30	0.09
J12	JUNCTION	0.01	0.04	257.16	0 02:31	0.04
J13	JUNCTION	0.01	0.04	262.98	0 02:30	0.04
J14	JUNCTION	0.02	0.11	262.79	0 02:30	0.11
J15	JUNCTION	0.01	0.08	264.44	0 02:30	0.08
J17	JUNCTION	0.00	0.03	263.25	0 02:30	0.03
J18	JUNCTION	0.01	0.11	262.00	0 02:30	0.11
J19	JUNCTION	0.01	0.08	262.15	0 02:18	0.08
J2	JUNCTION	0.00	0.04	259.46	0 02:31	0.04
J20	JUNCTION	0.01	0.07	262.04	0 02:30	0.07
J21	JUNCTION	0.01	0.08	264.15	0 02:30	0.08
J22	JUNCTION	0.02	0.12	262.21	0 02:30	0.12
J23	JUNCTION	0.04	0.32	257.64	0 02:37	0.32
J24	JUNCTION	0.00	0.04	264.22	0 02:30	0.04
J25	JUNCTION	0.02	0.15	258.10	0 02:32	0.15
J26	JUNCTION	0.04	0.28	241.02	0 02:29	0.28
J27	JUNCTION	0.02	0.13	262.31	0 02:31	0.13
J28	JUNCTION	0.04	0.23	231.10	0 02:33	0.23
J29	JUNCTION	0.01	0.07	230.89	0 02:30	0.07
J3	JUNCTION	0.03	0.14	261.25	0 02:32	0.14
J30	JUNCTION	0.02	0.09	262.24	0 02:34	0.09
J31	JUNCTION	0.01	0.07	262.13	0 02:30	0.07
J32	JUNCTION	0.00	0.03	230.80	0 02:30	0.03
J33	JUNCTION	0.01	0.07	230.50	0 02:30	0.07
J34	JUNCTION	0.03	0.12	262.02	0 02:30	0.12
J35	JUNCTION	0.02	0.09	261.99	0 02:30	0.09
J36	JUNCTION	0.00	0.04	230.20	0 02:30	0.04
J37	JUNCTION	0.01	0.04	262.74	0 02:30	0.04
J38	JUNCTION	0.01	0.05	261.11	0 02:30	0.05
J39	JUNCTION	0.01	0.09	261.84	0 02:31	0.09
J4	JUNCTION	0.03	0.11	260.61	0 02:30	0.11
J40	JUNCTION	0.01	0.05	262.29	0 02:30	0.05
J41	JUNCTION	0.01	0.04	262.07	0 02:30	0.04
J42	JUNCTION	0.01	0.05	261.67	0 02:30	0.05
J43	JUNCTION	0.01	0.11	257.47	0 02:31	0.11
J44	JUNCTION	0.01	0.04	261.96	0 02:30	0.04
J45	JUNCTION	0.01	0.06	261.88	0 02:30	0.06
J46	JUNCTION	0.01	0.06	262.55	0 02:30	0.06
J47	JUNCTION	0.01	0.10	240.27	0 02:30	0.10
J48	JUNCTION	0.01	0.06	261.71	0 02:32	0.06
J49	JUNCTION	0.01	0.07	261.16	0 02:33	0.07
J5	JUNCTION	0.00	0.00	264.10	0 00:00	0.00

J50	JUNCTION	0.00	0.06	261.26	0	02:30	0.06
J51	JUNCTION	0.01	0.09	260.76	0	02:30	0.09
J52	JUNCTION	0.01	0.11	253.44	0	02:30	0.11
J53	JUNCTION	0.01	0.06	252.74	0	02:31	0.06
J54	JUNCTION	0.02	0.14	230.79	0	02:32	0.14
J55	JUNCTION	0.27	0.32	249.74	0	02:31	0.32
J56	JUNCTION	0.04	0.28	237.13	0	02:31	0.28
J57	JUNCTION	0.01	0.09	236.54	0	02:31	0.09
J58	JUNCTION	0.04	0.27	234.16	0	02:32	0.27
J59	JUNCTION	0.02	0.11	233.49	0	02:32	0.11
J6	JUNCTION	0.04	0.19	260.88	0	02:29	0.19
J60	JUNCTION	0.02	0.12	250.28	0	02:31	0.12
J61	JUNCTION	0.01	0.09	261.13	0	02:30	0.09
J62	JUNCTION	0.04	0.24	232.07	0	02:28	0.24
J63	JUNCTION	0.02	0.12	231.78	0	02:32	0.11
J64	JUNCTION	0.01	0.05	235.75	0	02:30	0.05
J65	JUNCTION	0.02	0.19	231.71	0	02:30	0.19
J66	JUNCTION	0.01	0.07	230.89	0	02:30	0.07
J67	JUNCTION	0.02	0.20	228.35	0	02:30	0.20
J68	JUNCTION	0.01	0.06	227.69	0	02:30	0.06
J7	JUNCTION	0.01	0.04	263.51	0	03:30	0.04
J8	JUNCTION	0.01	0.04	263.41	0	02:30	0.04
J82	JUNCTION	0.01	0.04	261.74	0	02:30	0.04
J9	JUNCTION	0.01	0.08	263.03	0	02:30	0.08
STM-MH-EX	JUNCTION	0.02	0.19	258.61	0	02:30	0.19
J16	OUTFALL	0.01	0.06	262.94	0	02:30	0.06
OF1	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.01	0.06	225.25	0	02:30	0.06
OF4	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet1	OUTFALL	0.01	0.10	258.16	0	02:30	0.10
Outlet2_1	OUTFALL	0.01	0.07	256.81	0	02:30	0.07
Outlet2_2	OUTFALL	0.02	0.11	257.11	0	02:30	0.11
Outlet2_3	OUTFALL	0.02	0.19	257.37	0	02:37	0.19
Outlet2_4	OUTFALL	0.01	0.13	257.84	0	02:32	0.13
Outlet2_5	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet3	OUTFALL	0.00	0.00	260.20	0	00:00	0.00
Outlet4	OUTFALL	0.01	0.08	261.08	0	02:30	0.08
Outlet5_1	OUTFALL	0.01	0.04	249.74	0	02:31	0.04
Outlet5_2	OUTFALL	0.01	0.06	249.63	0	02:31	0.06
Outlet6-1	OUTFALL	0.00	0.00	226.37	0	00:00	0.00
Outlet6-2	OUTFALL	0.00	0.04	227.10	0	02:30	0.04
Outlet6-3	OUTFALL	0.02	0.11	230.74	0	02:32	0.11

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.040	0.105	0	02:30	0.31	0.718	0.110
J10	JUNCTION	0.032	0.044	0	02:30	0.126	0.187	-0.027
J11	JUNCTION	0.024	0.067	0	02:30	0.221	0.408	-0.035
J12	JUNCTION	0.003	0.022	0	02:30	0.0317	0.11	0.036
J13	JUNCTION	0.004	0.013	0	02:30	0.0217	0.0605	-0.035
J14	JUNCTION	0.000	0.011	0	02:30	0	0.0605	0.013
J15	JUNCTION	0.032	0.032	0	02:30	0.121	0.121	0.008
J17	JUNCTION	0.006	0.006	0	02:30	0.0213	0.0213	-0.399
J18	JUNCTION	0.008	0.019	0	02:30	0.0314	0.0817	0.022

J19	JUNCTION	0.005	0.010	0	02:30	0.0233	0.0447	0.293	
J2	JUNCTION	0.000	0.019	0	02:30	0	0.0817	0.009	
J20	JUNCTION	0.001	0.011	0	02:30	0.00569	0.0503	0.004	
J21	JUNCTION	0.026	0.026	0	02:30	0.0994	0.0994	-0.283	
J22	JUNCTION	0.053	0.079	0	02:30	0.199	0.313	-0.959	
J23	JUNCTION	0.001	0.079	0	02:30	0.0218	0.337	0.931	
J24	JUNCTION	0.007	0.007	0	02:30	0.0262	0.0262	-0.572	
J25	JUNCTION	0.001	0.037	0	02:30	0.0192	0.169	0.456	
J26	JUNCTION	0.081	0.081	0	02:30	0.599	0.599	0.037	
J27	JUNCTION	0.001	0.027	0	02:30	0.0145	0.114	0.388	
J28	JUNCTION	0.001	0.076	0	02:32	0.00956	0.609	0.070	
J29	JUNCTION	0.004	0.004	0	02:30	0.0157	0.0157	0.001	
J3	JUNCTION	0.003	0.021	0	02:30	0.0317	0.106	0.747	
J30	JUNCTION	0.003	0.009	0	02:30	0.0302	0.0565	0.348	
J31	JUNCTION	0.026	0.033	0	02:30	0.128	0.184	0.066	
J32	JUNCTION	0.000	0.004	0	02:30	0	0.0157	-0.021	
J33	JUNCTION	0.001	0.005	0	02:30	0.002	0.0177	0.121	
J34	JUNCTION	0.081	0.081	0	02:30	0.447	0.447	0.132	
J35	JUNCTION	0.036	0.036	0	02:30	0.213	0.213	-0.112	
J36	JUNCTION	0.007	0.012	0	02:30	0.0262	0.0439	-0.038	
J37	JUNCTION	0.004	0.004	0	02:30	0.0165	0.0165	-0.203	
J38	JUNCTION	0.001	0.016	0	02:30	0.00767	0.0648	-0.326	
J39	JUNCTION	0.001	0.012	0	02:30	0.00936	0.0574	0.389	
J4	JUNCTION	0.000	0.053	0	02:30	0	0.32	0.004	
J40	JUNCTION	0.011	0.011	0	02:30	0.048	0.048	-0.049	
J41	JUNCTION	0.008	0.008	0	02:30	0.0314	0.0314	-0.793	
J42	JUNCTION	0.011	0.011	0	02:30	0.0419	0.0419	-0.786	
J43	JUNCTION	0.000	0.021	0	02:30	0	0.0787	0.218	
J44	JUNCTION	0.021	0.021	0	02:30	0.0785	0.0785	-0.226	
J45	JUNCTION	0.011	0.011	0	02:30	0.0421	0.0421	-0.146	
J46	JUNCTION	0.014	0.014	0	02:30	0.0526	0.0526	-0.114	
J47	JUNCTION	0.000	0.088	0	02:30	0	0.599	-0.044	
J48	JUNCTION	0.001	0.005	0	02:30	0.00757	0.0241	0.250	
J49	JUNCTION	0.000	0.004	0	02:32	0	0.024	-0.030	
J5	JUNCTION	0.000	0.000	0	00:00	0	0	0.000	ltr
J50	JUNCTION	0.021	0.021	0	02:30	0.0785	0.0785	-0.076	
J51	JUNCTION	0.033	0.037	0	02:30	0.125	0.149	-0.367	
J52	JUNCTION	0.000	0.021	0	02:30	0	0.0785	0.026	
J53	JUNCTION	0.003	0.023	0	02:30	0.0324	0.111	0.044	
J54	JUNCTION	0.000	0.080	0	02:33	0	0.608	-0.068	
J55	JUNCTION	0.001	0.026	0	02:31	0.002	0.128	5.784	
J56	JUNCTION	0.000	0.080	0	02:30	0	0.599	0.024	
J57	JUNCTION	0.000	0.077	0	02:31	0	0.599	-0.022	
J58	JUNCTION	0.000	0.077	0	02:31	0	0.599	0.029	
J59	JUNCTION	0.000	0.074	0	02:32	0	0.599	-0.031	
J6	JUNCTION	0.005	0.040	0	02:30	0.042	0.255	0.122	
J60	JUNCTION	0.004	0.026	0	02:30	0.0157	0.126	-0.197	
J61	JUNCTION	0.000	0.044	0	02:30	0	0.2	0.067	
J62	JUNCTION	0.000	0.074	0	02:32	0	0.599	-0.021	
J63	JUNCTION	0.000	0.075	0	02:28	0	0.599	0.023	
J64	JUNCTION	0.020	0.020	0	02:30	0.0733	0.0733	-0.096	
J65	JUNCTION	0.029	0.048	0	02:30	0.148	0.221	0.188	
J66	JUNCTION	0.010	0.057	0	02:30	0.0367	0.257	-0.135	
J67	JUNCTION	0.000	0.057	0	02:30	0	0.258	0.047	
J68	JUNCTION	0.000	0.057	0	02:30	0	0.257	-0.044	
J7	JUNCTION	0.001	0.001	0	03:00	0.0126	0.0126	0.073	
J8	JUNCTION	0.007	0.007	0	02:30	0.0262	0.0388	-0.039	
J82	JUNCTION	0.000	0.019	0	02:30	0	0.0816	-0.071	
J9	JUNCTION	0.000	0.007	0	02:30	0	0.0388	0.148	
STM-MH-EX	JUNCTION	0.000	0.137	0	02:30	0	0.799	-0.044	
J16	OUTFALL	0.001	0.033	0	02:30	0.0142	0.135	0.000	
OF1	OUTFALL	0.003	0.003	0	02:30	0.0105	0.0105	0.000	
OF2	OUTFALL	0.003	0.003	0	02:30	0.0105	0.0105	0.000	
OF3	OUTFALL	0.000	0.057	0	02:30	0	0.258	0.000	

OF4	OUTFALL	0.011	0.011	0	02:30	0.0419	0.0419	0.000
Outlet1	OUTFALL	0.000	0.122	0	02:30	0	0.8	0.000
Outlet2_1	OUTFALL	0.004	0.035	0	02:30	0.0568	0.241	0.000
Outlet2_2	OUTFALL	0.004	0.081	0	02:30	0.0743	0.52	0.000
Outlet2_3	OUTFALL	0.000	0.059	0	02:37	0	0.334	0.000
Outlet2_4	OUTFALL	0.000	0.035	0	02:32	0	0.168	0.000
Outlet2_5	OUTFALL	0.030	0.030	0	02:30	0.123	0.123	0.000
Outlet3	OUTFALL	0.004	0.056	0	02:30	0.0157	0.336	0.000
Outlet4	OUTFALL	0.002	0.045	0	02:30	0.0165	0.216	0.000
Outlet5_1	OUTFALL	0.001	0.027	0	02:31	0.00595	0.127	0.000
Outlet5_2	OUTFALL	0.000	0.023	0	02:31	0	0.111	0.000
Outlet6-1	OUTFALL	0.026	0.026	0	02:30	0.104	0.104	0.000
Outlet6-2	OUTFALL	0.001	0.013	0	02:30	0.00399	0.0479	0.000
Outlet6-3	OUTFALL	0.017	0.088	0	02:30	0.0738	0.683	0.000

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J16	45.54	0.004	0.033	0.135
OF1	21.45	0.001	0.003	0.010
OF2	21.36	0.001	0.003	0.010
OF3	37.52	0.008	0.057	0.258
OF4	26.51	0.002	0.011	0.042
Outlet1	74.75	0.013	0.122	0.800
Outlet2_1	71.88	0.004	0.035	0.241
Outlet2_2	93.02	0.007	0.081	0.520
Outlet2_3	59.10	0.007	0.059	0.334
Outlet2_4	49.30	0.004	0.035	0.168
Outlet2_5	42.74	0.003	0.030	0.123
Outlet3	73.93	0.005	0.056	0.336
Outlet4	62.41	0.004	0.045	0.216
Outlet5_1	54.28	0.003	0.027	0.127
Outlet5_2	45.69	0.003	0.023	0.111
Outlet6-1	37.47	0.003	0.026	0.104
Outlet6-2	27.45	0.002	0.013	0.048
Outlet6-3	50.63	0.016	0.088	0.683
System	49.72	0.088	0.738	4.267

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.019	0	02:30	1.11	0.11	0.16
C10	CHANNEL	0.011	0	02:30	0.16	0.00	0.09
C11	CHANNEL	0.043	0	02:30	0.49	0.01	0.11
C12	CHANNEL	0.065	0	02:30	0.31	0.01	0.18
C13	CONDUIT	0.001	0	03:30	0.23	0.01	0.07
C14	CONDUIT	0.011	0	02:30	0.44	0.18	0.22
C15	CHANNEL	0.032	0	02:30	0.57	0.01	0.10
C16	CHANNEL	0.006	0	02:30	0.12	0.00	0.15
C17	CONDUIT	0.011	0	02:11	0.72	0.07	0.17
C18	CHANNEL	0.011	0	02:30	0.12	0.03	0.24
C19	CHANNEL	0.026	0	02:30	0.37	0.01	0.16
C2	CONDUIT	0.019	0	02:31	1.05	0.03	0.38
C20	CHANNEL	0.078	0	02:30	0.43	0.02	0.33
C21	CHANNEL	0.007	0	02:30	0.27	0.00	0.07
C22	CONDUIT	0.035	0	02:32	0.85	0.20	0.31
C23	CHANNEL	0.036	0	02:30	0.41	0.01	0.18
C24	CONDUIT	0.027	0	02:31	0.75	0.17	0.28
C25	CONDUIT	0.059	0	02:37	0.95	0.89	0.81
C26	CONDUIT	0.007	0	02:34	0.42	0.07	0.18
C27	CHANNEL	0.032	0	02:30	0.67	0.00	0.07
C28	CHANNEL	0.078	0	02:30	0.76	0.01	0.12
C29	CHANNEL	0.035	0	02:30	0.27	0.00	0.15
C3	CHANNEL	0.052	0	02:30	0.70	0.01	0.16
C30	CHANNEL	0.011	0	02:30	0.32	0.00	0.11
C31	CONDUIT	0.014	0	02:29	0.90	0.06	0.16
C32	CHANNEL	0.011	0	02:30	0.18	0.01	0.16
C33	CHANNEL	0.008	0	02:30	0.13	0.00	0.15
C34	CHANNEL	0.021	0	02:30	0.33	0.01	0.13
C35	CHANNEL	0.014	0	02:30	0.46	0.00	0.07
C36	CHANNEL	0.011	0	02:30	0.38	0.00	0.07
C37	CHANNEL	0.019	0	02:30	0.75	0.01	0.10
C38	CONDUIT	0.004	0	02:32	0.43	0.01	0.15
C39	CHANNEL	0.004	0	02:30	0.30	0.00	0.05
C4	CHANNEL	0.004	0	02:30	0.32	0.00	0.08
C40	CONDUIT	0.044	0	02:30	0.72	0.02	0.16
C41	CONDUIT	0.020	0	02:31	1.23	0.07	0.16
C42	CONDUIT	0.005	0	02:30	0.71	0.02	0.12
C43	CHANNEL	0.013	0	02:30	0.29	0.00	0.12
C44	CHANNEL	0.022	0	02:31	0.27	0.00	0.14
C45	CHANNEL	0.021	0	02:30	0.57	0.00	0.08
C46	CONDUIT	0.021	0	02:30	1.09	0.06	0.19
C47	CHANNEL	0.023	0	02:31	0.90	0.00	0.06
C48	CHANNEL	0.012	0	02:30	0.90	0.00	0.04
C5	CONDUIT	0.088	0	02:30	1.42	0.22	0.42
C50	CHANNEL	0.026	0	02:31	0.11	0.00	0.31
C51	CONDUIT	0.025	0	02:31	0.32	0.10	0.49
C52	CONDUIT	0.077	0	02:31	1.45	0.21	0.41
C53	CONDUIT	0.074	0	02:32	1.36	0.21	0.42
C54	CONDUIT	0.075	0	02:28	1.31	0.29	0.40
C55	CHANNEL	0.080	0	02:30	0.72	0.00	0.18
C56	CHANNEL	0.077	0	02:31	0.75	0.00	0.17
C57	CHANNEL	0.074	0	02:32	0.69	0.01	0.17
C58	CHANNEL	0.074	0	02:32	0.79	0.01	0.16
C59	CHANNEL	0.020	0	02:30	0.33	0.00	0.20
C6	CONDUIT	0.076	0	02:32	0.79	0.02	0.13
C60	CONDUIT	0.048	0	02:30	1.38	0.08	0.33
C61	CHANNEL	0.057	0	02:30	0.61	0.01	0.23
C62	CONDUIT	0.057	0	02:30	1.51	0.14	0.29

C63	CHANNEL	0.057	0	02:30	1.92	0.01	0.10
C7	CONDUIT	0.004	0	02:30	0.44	0.03	0.11
C8	CONDUIT	0.009	0	02:30	0.66	0.12	0.14
C9	CHANNEL	0.007	0	02:30	0.19	0.00	0.07
CW-1	CONDUIT	0.118	0	02:30	1.06	0.04	0.17
CW-2	CONDUIT	0.122	0	02:30	0.92	0.05	0.15
CW-3	CONDUIT	0.040	0	02:30	0.94	0.44	0.37
CW-4	CONDUIT	0.020	0	02:32	0.69	0.26	0.29
CW-5	CONDUIT	0.080	0	02:33	1.17	0.19	0.31
CW-6	CONDUIT	0.004	0	02:33	0.24	0.03	0.20
DI4	CHANNEL	0.000	0	00:00	0.00	0.00	0.02

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.00	0.25
C10	1.00	0.00	0.00	0.00	0.87	0.13	0.00	0.00	0.83	0.00
C11	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.91	0.00
C12	1.00	0.00	0.00	0.00	0.77	0.23	0.00	0.00	0.65	0.00
C13	1.00	0.00	0.31	0.00	0.69	0.00	0.00	0.00	0.00	0.58
C14	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.22
C15	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.51	0.00
C17	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	0.00	0.76
C18	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.59	0.00
C19	1.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.35	0.00
C2	1.00	0.00	0.02	0.00	0.92	0.06	0.00	0.00	0.97	0.00
C20	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.94	0.00
C21	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.92	0.00
C22	1.00	0.01	0.00	0.00	0.86	0.13	0.00	0.00	0.00	0.33
C23	1.00	0.00	0.00	0.00	0.70	0.30	0.00	0.00	0.66	0.00
C24	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.96
C25	1.00	0.01	0.00	0.00	0.83	0.16	0.00	0.00	0.00	0.49
C26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.41
C27	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C28	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.85	0.00
C3	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C30	1.00	0.00	0.00	0.00	0.78	0.22	0.00	0.00	0.22	0.00
C31	1.00	0.00	0.20	0.00	0.76	0.04	0.00	0.00	0.00	0.97
C32	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.93	0.00
C33	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.94	0.00
C34	1.00	0.00	0.00	0.00	0.33	0.67	0.00	0.00	0.30	0.00
C35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.92	0.00
C37	1.00	0.01	0.00	0.00	0.16	0.82	0.00	0.00	0.15	0.00
C38	1.00	0.01	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.25
C39	1.00	0.00	0.20	0.00	0.80	0.00	0.00	0.00	0.98	0.00
C4	1.00	0.00	0.00	0.00	0.83	0.17	0.00	0.00	0.21	0.00
C40	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.12
C41	1.00	0.01	0.02	0.00	0.88	0.09	0.00	0.00	0.00	0.93
C42	1.00	0.00	0.01	0.00	0.83	0.16	0.00	0.00	0.00	0.74
C43	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.00	0.97	0.00
C44	1.00	0.00	0.01	0.00	0.46	0.53	0.00	0.00	0.54	0.00
C45	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.96	0.00
C46	1.00	0.00	0.01	0.00	0.82	0.16	0.00	0.00	0.00	0.48
C47	1.00	0.00	0.00	0.00	0.67	0.33	0.00	0.00	0.52	0.00

C48	1.00	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.74	0.00
C5	1.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.88
C50	1.00	0.01	0.07	0.00	0.92	0.00	0.00	0.00	0.55	0.00
C51	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
C52	1.00	0.00	0.00	0.00	0.50	0.49	0.00	0.00	0.00	0.45
C53	1.00	0.01	0.00	0.00	0.54	0.45	0.00	0.00	0.00	0.47
C54	1.00	0.01	0.00	0.00	0.68	0.31	0.00	0.00	0.00	0.38
C55	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99	0.00
C56	1.00	0.00	0.16	0.00	0.83	0.01	0.00	0.00	0.99	0.00
C57	1.00	0.01	0.06	0.00	0.92	0.01	0.00	0.00	0.98	0.00
C58	1.00	0.00	0.08	0.00	0.91	0.00	0.00	0.00	0.96	0.00
C59	1.00	0.00	0.00	0.00	0.76	0.23	0.00	0.00	0.67	0.00
C6	1.00	0.18	0.00	0.00	0.82	0.00	0.00	0.00	0.37	0.00
C60	1.00	0.00	0.02	0.00	0.72	0.26	0.00	0.00	0.00	1.00
C61	1.00	0.00	0.00	0.00	0.58	0.42	0.00	0.00	0.46	0.00
C62	1.00	0.01	0.03	0.00	0.62	0.34	0.00	0.00	0.00	0.99
C63	1.00	0.01	0.00	0.00	0.33	0.66	0.00	0.00	0.00	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.07
C8	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.31
C9	1.00	0.00	0.00	0.00	0.91	0.09	0.00	0.00	0.79	0.00
CW-1	1.00	0.00	0.01	0.00	0.75	0.24	0.00	0.00	0.00	0.36
CW-2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.78
CW-3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
CW-4	1.00	0.01	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.09
CW-5	1.00	0.00	0.00	0.00	0.92	0.07	0.00	0.00	0.00	0.36
CW-6	1.00	0.00	0.55	0.00	0.45	0.00	0.00	0.00	0.00	0.97
DI4	1.00	0.31	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C25	0.01	0.27	0.01	0.01	0.01

Analysis begun on: Wed Sep 22 23:00:42 2021
Analysis ended on: Wed Sep 22 23:00:53 2021
Total elapsed time: 00:00:11

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
--------------------------------------------------------------

WARNING 03: negative offset ignored for Link C37
WARNING 03: negative offset ignored for Link CW-1
WARNING 03: negative offset ignored for Link DI4
WARNING 02: maximum depth increased for Node J10
WARNING 02: maximum depth increased for Node J11
WARNING 02: maximum depth increased for Node J12
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*************
Element Count
*************
Number of rain gages ...... 6
Number of subcatchments ... 101
Number of nodes ........... 87
Number of links ........... 69
Number of pollutants ...... 0
Number of land uses ....... 0


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Raingage Summary
****************
                                                 Data       Recording
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Pre Develpoment- 100-Year Storm Event

Name	Data Source	Type	Interval
100Year_12Hour_AES(Bloor,TRCA)	100Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
100Year_6Hour_AES(Bloor,TRCA)	100Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
10Year_12Hour_AES(Bloor,TRCA)	10Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
10Year_6Hour_AES(Bloor,TRCA)	10Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
50Year_12Hour_AES(Bloor,TRCA)	50Year_12Hour_AES(Bloor,TRCA)	INTENSITY	15 min.
50Year_6Hour_AES(Bloor,TRCA)	50Year_6Hour_AES(Bloor,TRCA)	INTENSITY	15 min.

****
Subcatchment Summary
****

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
D1	0.25	10.92	1.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J1
D10	0.33	11.58	1.00	1.8000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_1
D11	0.09	7.83	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
D12	0.47	11.03	1.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_2
D13	0.11	5.79	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J25
D14	0.04	5.56	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J48
D15	0.03	6.25	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J37
D16	0.18	11.61	1.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J6
D17	0.06	7.23	1.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J40
D18	0.05	7.04	1.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J39
D19	0.04	7.14	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J38
D2	0.03	5.00	1.00	0.7700	100Year_6Hour_AES(Bloor,TRCA)	J20
D20	0.10	8.33	1.00	0.3000	100Year_6Hour_AES(Bloor,TRCA)	J3
D21	0.05	4.17	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet4
D22	0.08	7.62	1.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J3
D23	0.04	3.33	1.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	Outlet4
D24	0.18	4.80	1.00	4.5000	100Year_6Hour_AES(Bloor,TRCA)	J12
D25	0.18	6.00	1.00	4.5000	100Year_6Hour_AES(Bloor,TRCA)	J53
D27	0.02	4.44	1.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-2
D28	0.01	4.54	1.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J33
D29	0.05	3.13	1.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J28
D3	0.04	3.64	1.00	0.7700	100Year_6Hour_AES(Bloor,TRCA)	J19
D4	0.06	11.54	1.00	0.4000	100Year_6Hour_AES(Bloor,TRCA)	J13
D40	0.03	9.09	1.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet5_1
D41	0.01	4.35	1.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J55
D5	0.08	5.00	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J16
D6	0.07	8.05	1.00	0.4000	100Year_6Hour_AES(Bloor,TRCA)	J7
D7	0.17	10.63	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J30
D8	0.08	5.00	1.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J27
D9	0.13	4.06	1.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J23
EXT1	1.08	83.08	7.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J1
EXT10	0.54	28.42	7.00	16.0000	100Year_6Hour_AES(Bloor,TRCA)	J65
EXT2	0.64	42.67	7.00	1.8000	100Year_6Hour_AES(Bloor,TRCA)	J11
EXT3	0.45	34.62	7.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J11
EXT4	0.10	18.18	7.00	3.0000	100Year_6Hour_AES(Bloor,TRCA)	J10
EXT5	0.24	10.91	7.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J31
EXT6	0.26	15.76	7.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	J34
EXT7	0.82	34.17	7.00	0.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
EXT8	0.60	46.15	7.00	0.2000	100Year_6Hour_AES(Bloor,TRCA)	J35
EXT9	2.59	92.50	7.00	7.3000	100Year_6Hour_AES(Bloor,TRCA)	J26
R1	0.09	11.25	90.00	0.3000	100Year_6Hour_AES(Bloor,TRCA)	J1
R10	0.05	6.67	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
R12	0.03	16.48	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
R13	0.05	3.13	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
R14	0.05	3.13	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J24
R15	0.14	8.75	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
R16	0.06	17.78	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J22
R17_1	0.16	7.62	90.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J31
R17_2	0.05	7.81	90.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J22

R18	0.27	9.47	90.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J22
R19	0.37	8.69	90.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
R2	0.06	7.50	90.00	0.3000	100Year_6Hour_AES(Bloor,TRCA)	J18
R20	0.24	8.04	90.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J51
R21	0.08	8.00	90.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
R22	0.03	6.25	90.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
R23	0.05	6.02	90.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J35
R24	0.14	9.03	90.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J35
R25	0.05	7.04	90.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J40
R26	0.03	5.41	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet3
R27	0.02	13.33	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J42
R28	0.02	14.29	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J6
R29	0.03	5.36	90.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J42
R3	0.11	8.33	90.00	0.6000	100Year_6Hour_AES(Bloor,TRCA)	J10
R30	0.03	5.36	90.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J45
R31	0.03	5.36	90.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J45
R32	0.03	5.36	90.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J42
R33	0.07	7.00	90.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J46
R34	0.06	6.00	90.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J41
R35	0.02	6.90	90.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	OF1
R36	0.15	5.56	90.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J44
R37	0.15	5.00	90.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J50
R38	0.03	6.00	90.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J60
R39	0.14	5.00	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J64
R39_1	0.04	5.97	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J66
R4	0.09	6.82	90.00	0.6000	100Year_6Hour_AES(Bloor,TRCA)	J10
R40_1	0.09	5.08	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R40_3	0.03	4.48	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J66
R40_4	0.06	5.46	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J65
R41_1	0.04	5.33	90.00	3.8000	100Year_6Hour_AES(Bloor,TRCA)	OF4
R41_3	0.03	5.00	90.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J29
R41_4	0.05	5.00	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J36
R41_5	0.12	5.46	90.00	5.7000	100Year_6Hour_AES(Bloor,TRCA)	J26
R42_1	0.08	5.00	90.00	3.2500	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R42_3	0.04	5.33	90.00	3.8000	100Year_6Hour_AES(Bloor,TRCA)	OF4
R42_4	0.11	5.00	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-3
R6	0.02	6.90	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J13
R7	0.02	6.90	90.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	OF2
R8	0.05	8.33	90.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	J8
R9	0.10	7.41	90.00	1.1000	100Year_6Hour_AES(Bloor,TRCA)	J15
S1	0.07	4.67	7.00	3.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
S2	0.08	8.00	7.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-3
SW1	0.03	5.00	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J19
SW10	0.03	2.50	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J46
SW11	0.20	16.67	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
SW2	0.04	3.64	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J17
SW3	0.05	2.94	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
SW4	0.01	1.39	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J37
SW5	0.01	2.08	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J37
SW6	0.01	1.21	95.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J40
SW7	0.01	1.33	95.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J40
SW9	0.02	1.82	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J45

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	260.21	1.50	0.0	
J10	JUNCTION	262.66	0.82	0.0	
J11	JUNCTION	262.28	0.82	0.0	
J12	JUNCTION	257.12	0.58	0.0	

J13	JUNCTION	262.94	0.82	0.0
J14	JUNCTION	262.67	0.82	0.0
J15	JUNCTION	264.36	0.74	0.0
J17	JUNCTION	263.22	0.50	0.0
J18	JUNCTION	261.89	0.50	0.0
J19	JUNCTION	262.06	0.50	0.0
J2	JUNCTION	259.42	1.50	0.0
J20	JUNCTION	261.97	0.50	0.0
J21	JUNCTION	264.07	0.70	0.0
J22	JUNCTION	262.09	0.70	0.0
J23	JUNCTION	257.32	0.70	0.0
J24	JUNCTION	264.18	0.95	0.0
J25	JUNCTION	257.95	0.70	0.0
J26	JUNCTION	240.74	0.80	0.0
J27	JUNCTION	262.18	0.70	0.0
J28	JUNCTION	230.87	1.04	0.0
J29	JUNCTION	230.82	0.70	0.0
J3	JUNCTION	261.11	0.58	0.0
J30	JUNCTION	262.15	0.95	0.0
J31	JUNCTION	262.07	0.95	0.0
J32	JUNCTION	230.76	1.04	0.0
J33	JUNCTION	230.43	1.04	0.0
J34	JUNCTION	261.90	0.95	0.0
J35	JUNCTION	261.90	0.95	0.0
J36	JUNCTION	230.17	1.04	0.0
J37	JUNCTION	262.70	0.70	0.0
J38	JUNCTION	261.06	0.70	0.0
J39	JUNCTION	261.75	0.70	0.0
J4	JUNCTION	260.50	0.70	0.0
J40	JUNCTION	262.24	0.70	0.0
J41	JUNCTION	262.03	0.58	0.0
J42	JUNCTION	261.62	0.58	0.0
J43	JUNCTION	257.37	0.58	0.0
J44	JUNCTION	261.92	0.58	0.0
J45	JUNCTION	261.82	1.04	0.0
J46	JUNCTION	262.49	1.04	0.0
J47	JUNCTION	240.17	1.04	0.0
J48	JUNCTION	261.64	0.70	0.0
J49	JUNCTION	261.09	0.70	0.0
J5	JUNCTION	264.10	0.87	0.0
J50	JUNCTION	261.20	1.04	0.0
J51	JUNCTION	260.67	0.70	0.0
J52	JUNCTION	253.33	1.04	0.0
J53	JUNCTION	252.68	1.04	0.0
J54	JUNCTION	230.65	1.00	0.0
J55	JUNCTION	249.42	0.58	0.0
J56	JUNCTION	236.85	1.04	0.0
J57	JUNCTION	236.45	1.04	0.0
J58	JUNCTION	233.89	1.04	0.0
J59	JUNCTION	233.38	1.04	0.0
J6	JUNCTION	260.69	0.95	0.0
J60	JUNCTION	250.16	0.90	0.0
J61	JUNCTION	261.04	1.04	0.0
J62	JUNCTION	231.83	1.04	0.0
J63	JUNCTION	231.66	1.04	0.0
J64	JUNCTION	235.70	0.59	0.0
J65	JUNCTION	231.52	0.60	0.0
J66	JUNCTION	230.82	0.60	0.0
J67	JUNCTION	228.15	0.60	0.0
J68	JUNCTION	227.63	0.60	0.0
J7	JUNCTION	263.47	0.87	0.0
J8	JUNCTION	263.37	0.82	0.0
J82	JUNCTION	261.70	0.50	0.0
J9	JUNCTION	262.95	0.82	0.0

STM-MH-EX	JUNCTION	258.42	4.38	0.0
J16	OUTFALL	262.88	0.74	0.0
OF1	OUTFALL	0.00	0.00	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	225.19	0.59	0.0
OF4	OUTFALL	0.00	0.00	0.0
Outlet1	OUTFALL	258.06	1.00	0.0
Outlet2_1	OUTFALL	256.74	0.95	0.0
Outlet2_2	OUTFALL	257.00	0.95	0.0
Outlet2_3	OUTFALL	257.18	0.30	0.0
Outlet2_4	OUTFALL	257.71	0.45	0.0
Outlet2_5	OUTFALL	0.00	0.00	0.0
Outlet3	OUTFALL	260.20	0.76	0.0
Outlet4	OUTFALL	261.00	0.50	0.0
Outlet5_1	OUTFALL	249.70	0.58	0.0
Outlet5_2	OUTFALL	249.57	1.04	0.0
Outlet6-1	OUTFALL	226.37	0.00	0.0
Outlet6-2	OUTFALL	227.06	1.04	0.0
Outlet6-3	OUTFALL	230.63	1.00	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J18	J82	CONDUIT	15.0	1.2668	0.0240
C10	J13	J14	CONDUIT	13.5	1.9485	0.0270
C11	J10	J11	CONDUIT	43.9	0.8708	0.0270
C12	J11	J1	CONDUIT	131.3	1.5767	0.0270
C13	J7	J8	CONDUIT	18.9	0.5291	0.0240
C14	J14	J10	CONDUIT	6.9	0.1594	0.0240
C15	J15	J16	CONDUIT	145.7	1.0158	0.0270
C16	J17	J19	CONDUIT	97.4	1.1880	0.0270
C17	J19	J20	CONDUIT	10.0	0.9400	0.0240
C18	J20	J18	CONDUIT	66.9	0.1181	0.0270
C19	J21	J27	CONDUIT	131.0	1.4418	0.0270
C2	J2	STM-MH-EX	CONDUIT	3.0	35.3553	0.0130
C20	J22	J23	CONDUIT	281.8	1.6929	0.0270
C21	J24	J30	CONDUIT	158.2	1.2858	0.0270
C22	J25	Outlet2_4	CONDUIT	18.0	1.3335	0.0240
C23	J51	J25	CONDUIT	188.4	1.4439	0.0270
C24	J27	J22	CONDUIT	8.6	1.0736	0.0240
C25	J23	Outlet2_3	CONDUIT	8.8	1.5911	0.0240
C26	J30	J31	CONDUIT	17.9	0.4469	0.0240
C27	J31	Outlet2_1	CONDUIT	269.0	1.9803	0.0270
C28	J34	Outlet2_2	CONDUIT	420.4	1.1656	0.0270
C29	J35	J6	CONDUIT	135.1	0.8955	0.0270
C3	J4	Outlet3	CONDUIT	13.4	1.4181	0.0270
C30	J40	J39	CONDUIT	23.9	2.0515	0.0270
C31	J39	J38	CONDUIT	24.0	2.8887	0.0240
C32	J42	J3	CONDUIT	86.0	0.5932	0.0270
C33	J41	J3	CONDUIT	104.5	0.8803	0.0270
C34	J44	J43	CONDUIT	157.3	2.8964	0.0270
C35	J46	J61	CONDUIT	109.4	1.3258	0.0270
C36	J45	J61	CONDUIT	91.7	0.8510	0.0270
C37	J82	J2	CONDUIT	47.3	4.8259	0.0270
C38	J48	J49	CONDUIT	15.0	3.6758	0.0240
C39	J32	J33	CONDUIT	20.5	1.6384	0.0270
C4	J37	J48	CONDUIT	50.7	2.0797	0.0270
C40	J61	Outlet4	CONDUIT	1.8	2.1983	0.0270
C41	J43	J12	CONDUIT	7.1	3.4528	0.0240
C42	J33	J36	CONDUIT	7.4	3.5428	0.0240
C43	J38	J4	CONDUIT	14.8	3.7764	0.0270

C44	J12	J60	CONDUIT	108.7	6.4161	0.0270
C45	J50	J52	CONDUIT	164.7	4.7838	0.0270
C46	J52	J53	CONDUIT	11.9	5.4704	0.0240
C47	J53	Outlet5_2	CONDUIT	82.5	3.7724	0.0270
C48	J36	Outlet6-2	CONDUIT	47.1	6.6040	0.0270
C5	J26	J47	CONDUIT	8.4	6.7933	0.0240
C50	J55	Outlet5_1	CONDUIT	3.7	-7.4876	0.0270
C51	J60	J55	CONDUIT	27.3	2.7116	0.0240
C52	J56	J57	CONDUIT	7.3	5.5015	0.0240
C53	J58	J59	CONDUIT	9.5	5.3762	0.0240
C54	J62	J63	CONDUIT	6.1	2.7880	0.0240
C55	J47	J56	CONDUIT	40.0	8.3183	0.0270
C56	J57	J58	CONDUIT	25.8	9.9678	0.0270
C57	J59	J62	CONDUIT	32.3	4.8013	0.0270
C58	J63	J28	CONDUIT	21.3	3.7003	0.0270
C59	J64	J65	CONDUIT	54.6	7.6711	0.0270
C6	J54	Outlet6-3	CONDUIT	4.4	0.3378	0.0250
C60	J65	J66	CONDUIT	8.9	7.8896	0.0130
C61	J66	J67	CONDUIT	28.6	9.3932	0.0270
C62	J67	J68	CONDUIT	7.3	7.1414	0.0240
C63	J68	OF3	CONDUIT	12.1	20.5882	0.0270
C7	J29	J32	CONDUIT	7.3	0.7123	0.0240
C8	J9	J13	CONDUIT	6.0	0.2333	0.0240
C9	J8	J9	CONDUIT	44.1	0.9524	0.0270
CW-1	J1	STM-MH-EX	CONDUIT	80.0	2.2381	0.0240
CW-2	STM-MH-EX	Outlet1	CONDUIT	42.0	0.8572	0.0130
CW-3	J6	J4	CONDUIT	29.7	0.6402	0.0240
CW-4	J3	J61	CONDUIT	15.0	0.4657	0.0240
CW-5	J28	J54	CONDUIT	14.6	1.5550	0.0240
CW-6	J49	J51	CONDUIT	27.0	1.5706	0.0240
DI4	J5	J7	CONDUIT	72.3	0.8710	0.0270

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.45	0.16	0.11	0.45	1	0.17
C10	Ditch2	0.82	3.94	0.45	8.53	1	11.99
C11	Ditch2	0.82	3.94	0.45	8.53	1	8.02
C12	Ditch2	0.82	3.94	0.45	8.53	1	10.79
C13	CIRCULAR	0.45	0.16	0.11	0.45	1	0.11
C14	CIRCULAR	0.45	0.16	0.11	0.45	1	0.06
C15	Ditch4	0.74	2.26	0.43	4.98	1	4.84
C16	Ditch3	0.38	0.88	0.22	3.75	1	1.31
C17	CIRCULAR	0.45	0.16	0.11	0.45	1	0.15
C18	Ditch3	0.38	0.88	0.22	3.75	1	0.41
C19	Ditch5	0.65	1.97	0.33	5.83	1	4.16
C2	CIRCULAR	0.30	0.07	0.07	0.30	1	0.58
C20	Ditch5	0.65	1.97	0.33	5.83	1	4.50
C21	Ditch7	0.95	3.51	0.51	6.28	1	9.46
C22	CIRCULAR	0.45	0.16	0.11	0.45	1	0.18
C23	Ditch5	0.65	1.97	0.33	5.83	1	4.16
C24	CIRCULAR	0.45	0.16	0.11	0.45	1	0.16
C25	CIRCULAR	0.30	0.07	0.07	0.30	1	0.07
C26	CIRCULAR	0.45	0.16	0.11	0.45	1	0.10
C27	Ditch7	0.95	3.51	0.51	6.28	1	11.74
C28	Ditch7	0.95	3.51	0.51	6.28	1	9.01
C29	Ditch7	0.95	3.51	0.51	6.28	1	7.89
C3	Ditch5	0.65	1.97	0.33	5.83	1	4.12
C30	Ditch5	0.65	1.97	0.33	5.83	1	4.96
C31	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26

C32	Ditch8	0.58	1.28	0.36	3.38	1	1.85
C33	Ditch8	0.58	1.28	0.36	3.38	1	2.25
C34	Ditch8	0.58	1.28	0.36	3.38	1	4.08
C35	Ditch9	1.04	2.75	0.43	5.96	1	6.74
C36	Ditch9	1.04	2.75	0.43	5.96	1	5.40
C37	Ditch3	0.38	0.88	0.22	3.75	1	2.64
C38	CIRCULAR	0.45	0.16	0.11	0.45	1	0.30
C39	Ditch9	1.04	2.75	0.43	5.96	1	7.49
C4	Ditch5	0.65	1.97	0.33	5.83	1	4.99
C40	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	2.31
C41	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C42	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C43	Ditch5	0.65	1.97	0.33	5.83	1	6.73
C44	Ditch8	0.58	1.28	0.36	3.38	1	6.07
C45	Ditch9	1.04	2.75	0.43	5.96	1	12.80
C46	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C47	Ditch9	1.04	2.75	0.43	5.96	1	11.37
C48	Ditch9	1.04	2.75	0.43	5.96	1	15.04
C5	CIRCULAR	0.45	0.16	0.11	0.45	1	0.40
C50	Ditch8	0.58	1.28	0.36	3.38	1	6.56
C51	CIRCULAR	0.45	0.16	0.11	0.45	1	0.25
C52	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C53	CIRCULAR	0.45	0.16	0.11	0.45	1	0.36
C54	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
C55	Ditch9	1.04	2.75	0.43	5.96	1	16.88
C56	Ditch9	1.04	2.75	0.43	5.96	1	18.48
C57	Ditch9	1.04	2.75	0.43	5.96	1	12.82
C58	Ditch9	1.04	2.75	0.43	5.96	1	11.26
C59	Ditch11	0.59	1.24	0.35	3.38	1	6.30
C6	TRAPEZOIDAL	1.00	2.50	0.50	4.50	1	3.68
C60	CIRCULAR	0.40	0.13	0.10	0.40	1	0.59
C61	Ditch11	0.59	1.24	0.35	3.38	1	6.97
C62	CIRCULAR	0.45	0.16	0.11	0.45	1	0.41
C63	Ditch11	0.59	1.24	0.35	3.38	1	10.32
C7	CIRCULAR	0.45	0.16	0.11	0.45	1	0.13
C8	CIRCULAR	0.45	0.16	0.11	0.45	1	0.07
C9	Ditch2	0.82	3.94	0.45	8.53	1	8.38
CW-1	CIRCULAR	1.20	1.13	0.30	1.20	1	3.16
CW-2	RECT_CLOSED	1.00	0.92	0.24	0.92	1	2.51
CW-3	CIRCULAR	0.40	0.13	0.10	0.40	1	0.09
CW-4	CIRCULAR	0.40	0.13	0.10	0.40	1	0.08
CW-5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.41
CW-6	CIRCULAR	0.40	0.13	0.10	0.40	1	0.14
DI4	Ditch1	0.87	2.77	0.48	5.46	1	5.89

****
Transect Summary
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Transect Ditch1
Area:

0.0016	0.0062	0.0123	0.0191	0.0265
0.0346	0.0432	0.0525	0.0625	0.0730
0.0842	0.0960	0.1084	0.1214	0.1351
0.1494	0.1643	0.1798	0.1960	0.2128
0.2302	0.2482	0.2669	0.2862	0.3061
0.3266	0.3478	0.3696	0.3920	0.4150
0.4387	0.4630	0.4879	0.5134	0.5396
0.5664	0.5937	0.6217	0.6503	0.6795
0.7093	0.7397	0.7708	0.8024	0.8346
0.8671	0.8999	0.9329	0.9663	1.0000

Hrad:

0.0180 0.0387 0.0679 0.0957 0.1216
0.1462 0.1697 0.1924 0.2143 0.2357
0.2566 0.2770 0.2972 0.3170 0.3366
0.3559 0.3751 0.3941 0.4129 0.4316
0.4502 0.4687 0.4871 0.5054 0.5236
0.5418 0.5598 0.5779 0.5958 0.6137
0.6316 0.6495 0.6672 0.6850 0.7028
0.7209 0.7389 0.7569 0.7749 0.7928
0.8107 0.8286 0.8464 0.8642 0.8868
0.9131 0.9392 0.9652 0.9910 1.0000

Width:
0.0915 0.1662 0.1887 0.2069 0.2250
0.2432 0.2614 0.2796 0.2978 0.3159
0.3341 0.3523 0.3705 0.3887 0.4068
0.4250 0.4432 0.4614 0.4796 0.4978
0.5159 0.5341 0.5523 0.5705 0.5887
0.6068 0.6250 0.6432 0.6614 0.6796
0.6977 0.7159 0.7341 0.7523 0.7703
0.7881 0.8058 0.8234 0.8411 0.8587
0.8763 0.8940 0.9116 0.9292 0.9417
0.9501 0.9584 0.9668 0.9752 1.0000

Transect Ditch10
Area:
0.0007 0.0027 0.0061 0.0101 0.0147
0.0198 0.0252 0.0312 0.0375 0.0462
0.0637 0.0817 0.1002 0.1193 0.1389
0.1590 0.1797 0.2007 0.2218 0.2431
0.2645 0.2861 0.3078 0.3297 0.3518
0.3741 0.3965 0.4191 0.4418 0.4648
0.4878 0.5111 0.5345 0.5581 0.5819
0.6058 0.6299 0.6542 0.6787 0.7033
0.7294 0.7569 0.7850 0.8135 0.8424
0.8718 0.9017 0.9322 0.9653 1.0000

Hrad:
0.0194 0.0369 0.0623 0.0893 0.1172
0.1435 0.1685 0.1925 0.2157 0.1087
0.1379 0.1716 0.2045 0.2365 0.2678
0.2984 0.3284 0.3627 0.3974 0.4309
0.4636 0.4958 0.5276 0.5590 0.5900
0.6207 0.6509 0.6808 0.7104 0.7396
0.7685 0.7970 0.8253 0.8533 0.8809
0.9083 0.9355 0.9623 0.9889 1.0153
0.9569 0.9754 0.9939 1.0122 1.0305
1.0488 1.0670 1.0537 1.0308 1.0000

Width:
0.0365 0.0786 0.1043 0.1216 0.1338
0.1461 0.1584 0.1707 0.1830 0.4550
0.4939 0.5086 0.5232 0.5379 0.5526
0.5673 0.5819 0.5865 0.5892 0.5932
0.5979 0.6026 0.6073 0.6120 0.6167
0.6214 0.6260 0.6307 0.6354 0.6401
0.6448 0.6495 0.6542 0.6588 0.6635
0.6682 0.6729 0.6776 0.6823 0.6870
0.7603 0.7732 0.7862 0.7991 0.8120
0.8250 0.8379 0.8789 0.9330 1.0000

Transect Ditch11
Area:
0.0011 0.0042 0.0092 0.0154 0.0221
0.0293 0.0369 0.0450 0.0536 0.0627
0.0722 0.0823 0.0928 0.1038 0.1153
0.1273 0.1399 0.1530 0.1666 0.1807
0.1953 0.2105 0.2272 0.2476 0.2696

```
            0.2926     0.3178     0.3449     0.3722     0.3997
            0.4275     0.4555     0.4838     0.5123     0.5410
            0.5700     0.5992     0.6286     0.6582     0.6881
            0.7183     0.7486     0.7792     0.8101     0.8411
            0.8724     0.9040     0.9358     0.9678     1.0000
Hrad:
            0.0169     0.0347     0.0522     0.0799     0.1061
            0.1308     0.1543     0.1769     0.1986     0.2196
            0.2401     0.2600     0.2790     0.2973     0.3154
            0.3332     0.3509     0.3684     0.3858     0.4031
            0.4202     0.4372     0.3938     0.3754     0.3892
            0.4032     0.3854     0.4144     0.4432     0.4717
            0.5000     0.5280     0.5559     0.5835     0.6109
            0.6381     0.6651     0.6919     0.7185     0.7450
            0.7712     0.7973     0.8232     0.8489     0.8745
            0.8999     0.9252     0.9503     0.9752     1.0000
Width:
            0.0661     0.1260     0.1837     0.1995     0.2141
            0.2288     0.2435     0.2582     0.2728     0.2875
            0.3022     0.3168     0.3323     0.3483     0.3643
            0.3802     0.3962     0.4122     0.4281     0.4441
            0.4601     0.4761     0.5761     0.6622     0.6961
            0.7301     0.8334     0.8407     0.8479     0.8551
            0.8624     0.8696     0.8769     0.8841     0.8914
            0.8986     0.9058     0.9131     0.9203     0.9276
            0.9348     0.9421     0.9493     0.9565     0.9638
            0.9710     0.9783     0.9855     0.9928     1.0000

Transect Ditch2
Area:
            0.0012     0.0049     0.0096     0.0149     0.0210
            0.0277     0.0350     0.0431     0.0518     0.0611
            0.0712     0.0819     0.0933     0.1053     0.1181
            0.1315     0.1456     0.1603     0.1757     0.1918
            0.2085     0.2259     0.2439     0.2626     0.2819
            0.3018     0.3224     0.3437     0.3655     0.3881
            0.4115     0.4357     0.4608     0.4867     0.5134
            0.5409     0.5693     0.5985     0.6285     0.6594
            0.6910     0.7234     0.7565     0.7904     0.8247
            0.8593     0.8941     0.9291     0.9644     1.0000
Hrad:
            0.0164     0.0408     0.0690     0.0947     0.1187
            0.1415     0.1634     0.1846     0.2054     0.2257
            0.2457     0.2654     0.2849     0.3042     0.3234
            0.3424     0.3614     0.3802     0.3989     0.4176
            0.4372     0.4563     0.4752     0.4940     0.5128
            0.5315     0.5501     0.5687     0.5872     0.6028
            0.6169     0.6312     0.6458     0.6606     0.6755
            0.6907     0.7060     0.7214     0.7370     0.7538
            0.7713     0.7888     0.8063     0.8251     0.8547
            0.8841     0.9133     0.9424     0.9713     1.0000
Width:
            0.0713     0.1218     0.1406     0.1594     0.1782
            0.1970     0.2158     0.2346     0.2534     0.2722
            0.2911     0.3099     0.3287     0.3475     0.3663
            0.3851     0.4039     0.4227     0.4415     0.4603
            0.4778     0.4958     0.5139     0.5321     0.5502
            0.5683     0.5864     0.6046     0.6227     0.6441
            0.6674     0.6906     0.7139     0.7372     0.7605
            0.7837     0.8070     0.8303     0.8536     0.8755
            0.8967     0.9179     0.9390     0.9587     0.9656
            0.9725     0.9794     0.9862     0.9931     1.0000

Transect Ditch3
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Pre Develpoment- 100-Year Storm Event

Area:

0.0017	0.0053	0.0108	0.0182	0.0266
0.0355	0.0451	0.0551	0.0657	0.0769
0.0886	0.1009	0.1137	0.1271	0.1410
0.1555	0.1705	0.1861	0.2023	0.2190
0.2363	0.2542	0.2730	0.2925	0.3128
0.3339	0.3557	0.3784	0.4018	0.4260
0.4509	0.4766	0.5030	0.5296	0.5566
0.5838	0.6114	0.6393	0.6675	0.6960
0.7249	0.7542	0.7837	0.8136	0.8438
0.8744	0.9053	0.9365	0.9681	1.0000

Hrad:

0.0212	0.0392	0.0565	0.0753	0.1029
0.1291	0.1542	0.1783	0.2016	0.2243
0.2464	0.2680	0.2891	0.3098	0.3302
0.3502	0.3699	0.3894	0.4087	0.4277
0.4466	0.4605	0.4741	0.4879	0.5019
0.5162	0.5308	0.5457	0.5607	0.5758
0.5910	0.6063	0.6291	0.6537	0.6780
0.7017	0.7244	0.7468	0.7690	0.7910
0.8127	0.8343	0.8556	0.8767	0.8977
0.9185	0.9391	0.9596	0.9799	1.0000

Width:

0.0839	0.1424	0.2010	0.2532	0.2705
0.2877	0.3050	0.3222	0.3395	0.3567
0.3740	0.3912	0.4085	0.4257	0.4430
0.4604	0.4779	0.4953	0.5128	0.5302
0.5477	0.5716	0.5962	0.6207	0.6453
0.6698	0.6940	0.7181	0.7421	0.7662
0.7902	0.8143	0.8267	0.8356	0.8446
0.8540	0.8645	0.8749	0.8853	0.8957
0.9062	0.9166	0.9270	0.9374	0.9479
0.9583	0.9687	0.9791	0.9896	1.0000

Transect Ditch4

Area:

0.0026	0.0072	0.0124	0.0184	0.0251
0.0324	0.0405	0.0493	0.0588	0.0690
0.0799	0.0915	0.1038	0.1168	0.1305
0.1448	0.1599	0.1757	0.1923	0.2095
0.2276	0.2464	0.2658	0.2858	0.3064
0.3275	0.3493	0.3716	0.3945	0.4180
0.4421	0.4667	0.4920	0.5178	0.5442
0.5712	0.5988	0.6270	0.6558	0.6852
0.7152	0.7458	0.7768	0.8080	0.8395
0.8711	0.9030	0.9351	0.9675	1.0000

Hrad:

0.0209	0.0491	0.0744	0.0976	0.1194
0.1402	0.1603	0.1798	0.1988	0.2175
0.2359	0.2542	0.2723	0.2903	0.3080
0.3257	0.3431	0.3597	0.3762	0.3927
0.4092	0.4258	0.4455	0.4650	0.4843
0.5034	0.5223	0.5411	0.5598	0.5783
0.5967	0.6150	0.6332	0.6512	0.6687
0.6862	0.7036	0.7210	0.7383	0.7556
0.7728	0.7909	0.8176	0.8441	0.8705
0.8967	0.9227	0.9486	0.9744	1.0000

Width:

0.1288	0.1504	0.1719	0.1935	0.2151
0.2367	0.2582	0.2798	0.3014	0.3229
0.3445	0.3658	0.3871	0.4084	0.4297
0.4510	0.4725	0.4952	0.5180	0.5407
0.5635	0.5860	0.6038	0.6216	0.6393
0.6571	0.6748	0.6926	0.7103	0.7281

```
            0.7458     0.7636     0.7813     0.7992     0.8176
            0.8361     0.8545     0.8729     0.8913     0.9098
            0.9282     0.9456     0.9524     0.9592     0.9660
            0.9728     0.9796     0.9864     0.9932     1.0000

Transect Ditch5
Area:
            0.0007     0.0027     0.0060     0.0106     0.0163
            0.0229     0.0301     0.0381     0.0466     0.0559
            0.0659     0.0765     0.0878     0.0997     0.1124
            0.1257     0.1397     0.1544     0.1697     0.1857
            0.2024     0.2197     0.2376     0.2562     0.2755
            0.2954     0.3159     0.3371     0.3590     0.3815
            0.4047     0.4285     0.4531     0.4785     0.5048
            0.5319     0.5599     0.5888     0.6185     0.6492
            0.6806     0.7129     0.7461     0.7802     0.8151
            0.8509     0.8873     0.9242     0.9618     1.0000
Hrad:
            0.0195     0.0390     0.0592     0.0796     0.1021
            0.1289     0.1543     0.1787     0.2023     0.2252
            0.2476     0.2696     0.2913     0.3127     0.3338
            0.3548     0.3756     0.3962     0.4171     0.4381
            0.4588     0.4794     0.4999     0.5204     0.5407
            0.5609     0.5811     0.6012     0.6212     0.6412
            0.6611     0.6810     0.6956     0.7103     0.7252
            0.7405     0.7559     0.7716     0.7875     0.8036
            0.8199     0.8363     0.8528     0.8693     0.8859
            0.9067     0.9302     0.9536     0.9769     1.0000
Width:
            0.0348     0.0695     0.1028     0.1344     0.1618
            0.1794     0.1969     0.2145     0.2321     0.2496
            0.2672     0.2847     0.3023     0.3198     0.3374
            0.3549     0.3725     0.3901     0.4071     0.4240
            0.4410     0.4579     0.4749     0.4918     0.5087
            0.5257     0.5426     0.5596     0.5765     0.5935
            0.6104     0.6274     0.6495     0.6719     0.6943
            0.7167     0.7391     0.7616     0.7840     0.8064
            0.8288     0.8512     0.8737     0.8963     0.9190
            0.9375     0.9531     0.9687     0.9844     1.0000

Transect Ditch6
Area:
            0.0027     0.0089     0.0159     0.0235     0.0319
            0.0409     0.0507     0.0612     0.0724     0.0843
            0.0970     0.1103     0.1243     0.1391     0.1546
            0.1707     0.1873     0.2044     0.2220     0.2401
            0.2587     0.2777     0.2973     0.3173     0.3378
            0.3588     0.3802     0.4022     0.4246     0.4476
            0.4710     0.4949     0.5194     0.5442     0.5693
            0.5946     0.6203     0.6464     0.6731     0.7002
            0.7278     0.7558     0.7843     0.8133     0.8428
            0.8727     0.9033     0.9347     0.9670     1.0000
Hrad:
            0.0161     0.0463     0.0740     0.0997     0.1239
            0.1470     0.1691     0.1906     0.2114     0.2317
            0.2517     0.2713     0.2906     0.3097     0.3285
            0.3505     0.3732     0.3956     0.4177     0.4394
            0.4608     0.4820     0.5030     0.5237     0.5442
            0.5645     0.5846     0.6046     0.6244     0.6441
            0.6636     0.6830     0.7014     0.7275     0.7534
            0.7775     0.7967     0.8158     0.8348     0.8537
            0.8726     0.8914     0.9101     0.9288     0.9474
            0.9639     0.9723     0.9811     0.9904     1.0000
Width:
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            0.1730     0.1966     0.2179     0.2392     0.2605
            0.2818     0.3031     0.3244     0.3457     0.3670
            0.3883     0.4096     0.4309     0.4522     0.4735
            0.4898     0.5043     0.5188     0.5333     0.5478
            0.5624     0.5769     0.5914     0.6059     0.6204
            0.6349     0.6494     0.6639     0.6785     0.6930
            0.7075     0.7220     0.7380     0.7453     0.7527
            0.7617     0.7757     0.7897     0.8037     0.8177
            0.8317     0.8457     0.8597     0.8737     0.8877
            0.9037     0.9278     0.9519     0.9759     1.0000

Transect Ditch7
Area:
            0.0018     0.0059     0.0107     0.0162     0.0224
            0.0293     0.0369     0.0453     0.0544     0.0642
            0.0747     0.0859     0.0979     0.1105     0.1239
            0.1380     0.1529     0.1684     0.1847     0.2017
            0.2194     0.2378     0.2570     0.2768     0.2974
            0.3188     0.3408     0.3636     0.3870     0.4112
            0.4362     0.4618     0.4881     0.5152     0.5429
            0.5711     0.5995     0.6283     0.6574     0.6869
            0.7166     0.7468     0.7772     0.8080     0.8391
            0.8706     0.9024     0.9345     0.9669     1.0000
Hrad:
            0.0184     0.0490     0.0759     0.1005     0.1236
            0.1456     0.1669     0.1876     0.2078     0.2277
            0.2473     0.2667     0.2858     0.3049     0.3238
            0.3425     0.3611     0.3797     0.3982     0.4166
            0.4350     0.4533     0.4716     0.4898     0.5081
            0.5263     0.5444     0.5626     0.5807     0.5988
            0.6169     0.6353     0.6543     0.6731     0.6912
            0.7158     0.7401     0.7641     0.7878     0.8112
            0.8343     0.8571     0.8797     0.9020     0.9241
            0.9460     0.9677     0.9891     1.0104     1.0000
Width:
            0.1084     0.1294     0.1505     0.1715     0.1925
            0.2136     0.2346     0.2557     0.2767     0.2978
            0.3188     0.3399     0.3609     0.3820     0.4030
            0.4241     0.4453     0.4665     0.4876     0.5088
            0.5299     0.5511     0.5722     0.5934     0.6145
            0.6357     0.6568     0.6780     0.6991     0.7203
            0.7414     0.7622     0.7821     0.8066     0.8194
            0.8292     0.8390     0.8488     0.8586     0.8684
            0.8782     0.8880     0.8978     0.9076     0.9174
            0.9272     0.9370     0.9468     0.9566     1.0000

Transect Ditch8
Area:
            0.0023     0.0092     0.0192     0.0298     0.0409
            0.0525     0.0644     0.0768     0.0896     0.1029
            0.1167     0.1310     0.1458     0.1610     0.1768
            0.1930     0.2097     0.2270     0.2446     0.2628
            0.2815     0.3007     0.3203     0.3405     0.3611
            0.3821     0.4035     0.4253     0.4474     0.4699
            0.4928     0.5161     0.5397     0.5638     0.5882
            0.6130     0.6382     0.6638     0.6897     0.7161
            0.7428     0.7699     0.7974     0.8253     0.8536
            0.8822     0.9112     0.9405     0.9700     1.0000
Hrad:
            0.0160     0.0324     0.0596     0.0874     0.1138
            0.1406     0.1664     0.1915     0.2146     0.2370
            0.2588     0.2801     0.3009     0.3213     0.3414
            0.3611     0.3805     0.3996     0.4184     0.4370
            0.4554     0.4737     0.4917     0.5095     0.5272
```

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            0.5492     0.5707     0.5911     0.6114     0.6315
            0.6514     0.6712     0.6908     0.7104     0.7298
            0.7491     0.7682     0.7873     0.8062     0.8251
            0.8439     0.8625     0.8811     0.8996     0.9181
            0.9366     0.9575     0.9783     0.9989     1.0000
Width:
            0.1514     0.2983     0.3357     0.3537     0.3718
            0.3847     0.3977     0.4107     0.4264     0.4423
            0.4582     0.4742     0.4901     0.5061     0.5220
            0.5379     0.5539     0.5698     0.5858     0.6017
            0.6177     0.6336     0.6495     0.6655     0.6814
            0.6923     0.7036     0.7161     0.7286     0.7411
            0.7536     0.7662     0.7787     0.7912     0.8037
            0.8163     0.8288     0.8413     0.8538     0.8663
            0.8789     0.8914     0.9039     0.9164     0.9290
            0.9413     0.9509     0.9605     0.9701     1.0000

Transect Ditch9
Area:
            0.0023     0.0054     0.0092     0.0137     0.0189
            0.0249     0.0316     0.0390     0.0471     0.0560
            0.0656     0.0759     0.0870     0.0987     0.1112
            0.1245     0.1384     0.1531     0.1685     0.1846
            0.2015     0.2191     0.2375     0.2566     0.2764
            0.2970     0.3184     0.3404     0.3633     0.3869
            0.4113     0.4364     0.4624     0.4891     0.5168
            0.5452     0.5740     0.6034     0.6331     0.6633
            0.6940     0.7252     0.7569     0.7890     0.8216
            0.8546     0.8881     0.9221     0.9589     1.0000
Hrad:
            0.0403     0.0725     0.1008     0.1272     0.1524
            0.1768     0.2006     0.2241     0.2473     0.2703
            0.2932     0.3158     0.3384     0.3609     0.3834
            0.4057     0.4281     0.4503     0.4724     0.4943
            0.5162     0.5382     0.5601     0.5820     0.6039
            0.6257     0.6471     0.6686     0.6901     0.7116
            0.7332     0.7544     0.7753     0.7964     0.8115
            0.8426     0.8735     0.9041     0.9344     0.9643
            0.9939     1.0234     1.0526     1.0816     1.1104
            1.1391     1.1676     1.1830     1.1057     1.0000
Width:
            0.0597     0.0758     0.0919     0.1079     0.1240
            0.1401     0.1562     0.1722     0.1883     0.2044
            0.2205     0.2365     0.2526     0.2687     0.2848
            0.3008     0.3169     0.3330     0.3492     0.3656
            0.3819     0.3983     0.4147     0.4311     0.4474
            0.4640     0.4808     0.4976     0.5144     0.5313
            0.5481     0.5653     0.5827     0.6002     0.6234
            0.6336     0.6438     0.6540     0.6641     0.6745
            0.6849     0.6953     0.7057     0.7162     0.7266
            0.7370     0.7474     0.7668     0.8596     1.0000


**********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
**********************************************************

***************
Analysis Options
***************
Flow Units ..... CMS
Process Models:
```

```
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 09/20/2021 00:00:00
Ending Date .............. 09/21/2021 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:00:10
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 1.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         1.189        80.310
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.432        29.221
Surface Runoff ...........         0.728        49.160
Final Storage ............         0.030         2.012
Continuity Error (%) .....        -0.103


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.728         7.276
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         0.727         7.267
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.003
Continuity Error (%) .....         0.087


*************************
Highest Continuity Errors
*************************
Node J55 (3.39%)
Node J22 (-1.03%)


***************************
Time-Step Critical Elements
***************************
Link C40 (3.54%)
```

****
Highest Flow Instability Indexes
****
Link C50 (22)
Link CW-5 (6)
Link C6 (5)
Link C5 (5)
Link CW-1 (5)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 1.00 sec
Maximum Time Step : 1.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00
Time Step Frequencies :
1.000 - 0.871 sec : 98.24 %
0.871 - 0.758 sec : 1.76 %
0.758 - 0.660 sec : 0.00 %
0.660 - 0.574 sec : 0.00 %
0.574 - 0.500 sec : 0.00 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Tota Runo 10^6 l
D1	80.31	0.00	0.00	42.30	0.79	33.00	33.79	0.0
D10	80.31	0.00	0.00	42.30	0.79	34.66	35.45	0.1
D11	80.31	0.00	0.00	42.30	0.79	35.88	36.67	0.0
D12	80.31	0.00	0.00	42.30	0.79	32.98	33.77	0.1
D13	80.31	0.00	0.00	42.30	0.79	34.91	35.70	0.0
D14	80.31	0.00	0.00	41.75	0.79	36.55	37.34	0.0
D15	80.31	0.00	0.00	41.33	0.79	36.99	37.78	0.0
D16	80.31	0.00	0.00	42.30	0.79	34.97	35.76	0.0
D17	80.31	0.00	0.00	42.19	0.79	36.11	36.90	0.0
D18	80.31	0.00	0.00	41.97	0.79	36.34	37.13	0.0
D19	80.31	0.00	0.00	41.50	0.79	36.84	37.63	0.0
D2	80.31	0.00	0.00	41.69	0.79	36.61	37.40	0.0
D20	80.31	0.00	0.00	42.30	0.79	34.58	35.37	0.0
D21	80.31	0.00	0.00	42.30	0.79	35.81	36.60	0.0
D22	80.31	0.00	0.00	42.30	0.79	35.73	36.52	0.0
D23	80.31	0.00	0.00	42.17	0.79	36.13	36.92	0.0
D24	80.31	0.00	0.00	42.30	0.79	35.07	35.86	0.0
D25	80.31	0.00	0.00	42.30	0.79	35.51	36.30	0.0
D27	80.31	0.00	0.00	40.72	0.79	37.67	38.46	0.0
D28	80.31	0.00	0.00	40.64	0.79	37.75	38.54	0.0
D29	80.31	0.00	0.00	41.56	0.79	36.75	37.54	0.0
D3	80.31	0.00	0.00	42.30	0.79	35.73	36.52	0.0
D4	80.31	0.00	0.00	41.92	0.79	36.38	37.17	0.0
D40	80.31	0.00	0.00	40.83	0.79	37.53	38.32	0.0
D41	80.31	0.00	0.00	40.67	0.79	37.73	38.52	0.0
D5	80.31	0.00	0.00	42.30	0.79	35.27	36.06	0.0
D6	80.31	0.00	0.00	42.30	0.79	35.56	36.36	0.0
D7	80.31	0.00	0.00	42.30	0.79	35.27	36.06	0.0

Pre Develpoment- 100-Year Storm Event

D8	80.31	0.00	0.00	42.30	0.79	35.66	36.45	0.0
D9	80.31	0.00	0.00	42.30	0.79	34.14	34.93	0.0
EXT1	80.31	0.00	0.00	39.64	5.53	33.92	39.45	0.4
EXT10	80.31	0.00	0.00	38.78	5.53	34.81	40.34	0.2
EXT2	80.31	0.00	0.00	39.71	5.53	33.84	39.37	0.2
EXT3	80.31	0.00	0.00	39.74	5.53	32.99	38.52	0.1
EXT4	80.31	0.00	0.00	38.49	5.54	35.11	40.65	0.0
EXT5	80.31	0.00	0.00	39.74	5.53	31.30	36.83	0.0
EXT6	80.31	0.00	0.00	39.74	5.53	33.43	38.96	0.1
EXT7	80.31	0.00	0.00	39.74	5.53	30.15	35.68	0.2
EXT8	80.31	0.00	0.00	39.74	5.53	31.96	37.49	0.2
EXT9	80.31	0.00	0.00	39.61	5.53	33.95	39.48	1.0
R1	80.31	0.00	0.00	1.87	71.08	5.78	76.86	0.0
R10	80.31	0.00	0.00	1.87	71.13	5.80	76.92	0.0
R12	80.31	0.00	0.00	1.87	71.12	5.82	76.94	0.0
R13	80.31	0.00	0.00	1.87	71.08	5.78	76.85	0.0
R14	80.31	0.00	0.00	1.87	71.08	5.78	76.85	0.0
R15	80.31	0.00	0.00	1.87	71.08	5.78	76.85	0.1
R16	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R17_1	80.31	0.00	0.00	1.87	71.07	5.78	76.85	0.1
R17_2	80.31	0.00	0.00	1.87	71.14	5.80	76.95	0.0
R18	80.31	0.00	0.00	1.87	71.05	5.77	76.82	0.2
R19	80.31	0.00	0.00	1.87	71.01	5.75	76.76	0.2
R2	80.31	0.00	0.00	1.87	71.08	5.78	76.86	0.0
R20	80.31	0.00	0.00	1.87	71.04	5.76	76.80	0.1
R21	80.31	0.00	0.00	1.87	71.11	5.79	76.91	0.0
R22	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R23	80.31	0.00	0.00	1.87	71.11	5.79	76.90	0.0
R24	80.31	0.00	0.00	1.87	71.06	5.77	76.84	0.1
R25	80.31	0.00	0.00	1.87	71.12	5.79	76.91	0.0
R26	80.31	0.00	0.00	1.87	71.14	5.80	76.94	0.0
R27	80.31	0.00	0.00	1.87	71.12	5.82	76.93	0.0
R28	80.31	0.00	0.00	1.87	71.11	5.82	76.93	0.0
R29	80.31	0.00	0.00	1.87	71.12	5.79	76.92	0.0
R3	80.31	0.00	0.00	1.87	71.07	5.78	76.85	0.0
R30	80.31	0.00	0.00	1.87	71.12	5.79	76.92	0.0
R31	80.31	0.00	0.00	1.87	71.11	5.79	76.90	0.0
R32	80.31	0.00	0.00	1.87	71.11	5.79	76.90	0.0
R33	80.31	0.00	0.00	1.87	71.08	5.78	76.87	0.0
R34	80.31	0.00	0.00	1.87	71.08	5.78	76.87	0.0
R35	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R36	80.31	0.00	0.00	1.87	71.08	5.78	76.86	0.1
R37	80.31	0.00	0.00	1.87	71.07	5.78	76.85	0.1
R38	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R39	80.31	0.00	0.00	1.87	71.10	5.79	76.89	0.1
R39_1	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R4	80.31	0.00	0.00	1.87	71.07	5.78	76.85	0.0
R40_1	80.31	0.00	0.00	1.87	71.13	5.80	76.93	0.0
R40_3	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R40_4	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_1	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_3	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_4	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_5	80.31	0.00	0.00	1.87	71.11	5.79	76.90	0.0
R42_1	80.31	0.00	0.00	1.87	71.12	5.79	76.91	0.0
R42_3	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R42_4	80.31	0.00	0.00	1.87	71.12	5.79	76.91	0.0
R6	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R7	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R8	80.31	0.00	0.00	1.87	71.14	5.80	76.94	0.0
R9	80.31	0.00	0.00	1.87	71.09	5.78	76.87	0.0
S1	80.31	0.00	0.00	39.38	5.53	34.19	39.72	0.0
S2	80.31	0.00	0.00	39.74	5.53	33.47	39.00	0.0
SW1	80.31	0.00	0.00	0.93	75.09	2.91	77.99	0.0

SW10	80.31	0.00	0.00	0.93	75.04	2.90	77.94	0.0
SW11	80.31	0.00	0.00	0.93	75.05	2.90	77.95	0.1
SW2	80.31	0.00	0.00	0.93	75.05	2.90	77.95	0.0
SW3	80.31	0.00	0.00	0.93	75.01	2.90	77.91	0.0
SW4	80.31	0.00	0.00	0.93	75.08	2.90	77.98	0.0
SW5	80.31	0.00	0.00	0.93	75.09	2.91	78.00	0.0
SW6	80.31	0.00	0.00	0.93	75.05	2.90	77.96	0.0
SW7	80.31	0.00	0.00	0.93	75.06	2.90	77.96	0.0
SW9	80.31	0.00	0.00	0.93	75.05	2.90	77.95	0.0

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
J1	JUNCTION	0.05	0.27	260.48	0 02:32	0.27
J10	JUNCTION	0.02	0.11	262.77	0 02:30	0.11
J11	JUNCTION	0.02	0.12	262.40	0 02:30	0.12
J12	JUNCTION	0.01	0.05	257.17	0 02:31	0.05
J13	JUNCTION	0.01	0.05	262.99	0 02:30	0.05
J14	JUNCTION	0.02	0.14	262.82	0 02:30	0.14
J15	JUNCTION	0.01	0.10	264.46	0 02:30	0.10
J17	JUNCTION	0.00	0.04	263.26	0 02:30	0.04
J18	JUNCTION	0.02	0.13	262.02	0 02:30	0.13
J19	JUNCTION	0.01	0.10	262.16	0 02:30	0.10
J2	JUNCTION	0.01	0.05	259.47	0 02:31	0.05
J20	JUNCTION	0.01	0.09	262.06	0 02:31	0.09
J21	JUNCTION	0.01	0.09	264.16	0 02:30	0.09
J22	JUNCTION	0.02	0.14	262.23	0 02:30	0.14
J23	JUNCTION	0.05	0.42	257.74	0 02:37	0.42
J24	JUNCTION	0.01	0.04	264.22	0 02:30	0.04
J25	JUNCTION	0.03	0.21	258.16	0 02:31	0.21
J26	JUNCTION	0.06	0.50	241.24	0 02:30	0.50
J27	JUNCTION	0.02	0.16	262.34	0 02:30	0.16
J28	JUNCTION	0.05	0.39	231.27	0 02:34	0.39
J29	JUNCTION	0.01	0.08	230.90	0 02:29	0.08
J3	JUNCTION	0.03	0.18	261.29	0 02:32	0.18
J30	JUNCTION	0.02	0.12	262.27	0 02:34	0.12
J31	JUNCTION	0.02	0.09	262.15	0 02:30	0.09
J32	JUNCTION	0.00	0.04	230.80	0 02:29	0.04
J33	JUNCTION	0.01	0.08	230.51	0 02:30	0.08
J34	JUNCTION	0.03	0.15	262.05	0 02:30	0.15
J35	JUNCTION	0.02	0.11	262.01	0 02:30	0.11
J36	JUNCTION	0.00	0.05	230.21	0 02:30	0.05
J37	JUNCTION	0.01	0.04	262.74	0 02:30	0.04
J38	JUNCTION	0.01	0.06	261.12	0 02:30	0.06
J39	JUNCTION	0.01	0.11	261.86	0 02:30	0.11
J4	JUNCTION	0.03	0.13	260.63	0 02:31	0.13
J40	JUNCTION	0.01	0.06	262.30	0 02:30	0.06
J41	JUNCTION	0.01	0.04	262.07	0 02:30	0.04
J42	JUNCTION	0.01	0.06	261.68	0 02:30	0.06
J43	JUNCTION	0.01	0.13	257.50	0 02:30	0.13
J44	JUNCTION	0.01	0.05	261.97	0 02:30	0.05
J45	JUNCTION	0.01	0.08	261.90	0 02:30	0.08
J46	JUNCTION	0.01	0.08	262.57	0 02:30	0.08
J47	JUNCTION	0.02	0.15	240.32	0 02:30	0.15
J48	JUNCTION	0.01	0.08	261.72	0 02:25	0.08
J49	JUNCTION	0.01	0.08	261.18	0 02:30	0.08
J5	JUNCTION	0.00	0.00	264.10	0 00:00	0.00

J50	JUNCTION	0.01	0.07	261.27	0	02:30	0.07
J51	JUNCTION	0.02	0.11	260.78	0	02:29	0.11
J52	JUNCTION	0.01	0.13	253.46	0	02:30	0.13
J53	JUNCTION	0.01	0.08	252.76	0	02:30	0.08
J54	JUNCTION	0.03	0.21	230.86	0	02:33	0.21
J55	JUNCTION	0.27	0.33	249.75	0	02:31	0.33
J56	JUNCTION	0.06	0.49	237.34	0	02:31	0.49
J57	JUNCTION	0.02	0.14	236.59	0	02:31	0.14
J58	JUNCTION	0.06	0.49	234.38	0	02:32	0.49
J59	JUNCTION	0.02	0.16	233.54	0	02:32	0.16
J6	JUNCTION	0.05	0.27	260.96	0	02:32	0.27
J60	JUNCTION	0.02	0.16	250.32	0	02:31	0.16
J61	JUNCTION	0.01	0.11	261.15	0	02:30	0.11
J62	JUNCTION	0.06	0.49	232.32	0	02:33	0.49
J63	JUNCTION	0.02	0.17	231.83	0	02:33	0.17
J64	JUNCTION	0.01	0.06	235.76	0	02:30	0.06
J65	JUNCTION	0.03	0.32	231.84	0	02:30	0.32
J66	JUNCTION	0.01	0.10	230.92	0	02:30	0.10
J67	JUNCTION	0.03	0.28	228.43	0	02:30	0.28
J68	JUNCTION	0.01	0.08	227.71	0	02:30	0.08
J7	JUNCTION	0.01	0.06	263.53	0	03:01	0.06
J8	JUNCTION	0.01	0.05	263.42	0	02:30	0.05
J82	JUNCTION	0.01	0.05	261.75	0	02:30	0.05
J9	JUNCTION	0.02	0.09	263.04	0	02:27	0.09
STM-MH-EX	JUNCTION	0.03	0.29	258.71	0	02:32	0.29
J16	OUTFALL	0.01	0.08	262.96	0	02:30	0.08
OF1	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.01	0.08	225.27	0	02:30	0.08
OF4	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet1	OUTFALL	0.02	0.15	258.21	0	02:32	0.15
Outlet2_1	OUTFALL	0.02	0.09	256.83	0	02:30	0.09
Outlet2_2	OUTFALL	0.03	0.14	257.14	0	02:30	0.14
Outlet2_3	OUTFALL	0.03	0.23	257.41	0	02:37	0.23
Outlet2_4	OUTFALL	0.02	0.17	257.88	0	02:31	0.17
Outlet2_5	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet3	OUTFALL	0.00	0.00	260.20	0	00:00	0.00
Outlet4	OUTFALL	0.01	0.09	261.09	0	02:30	0.09
Outlet5_1	OUTFALL	0.01	0.05	249.75	0	02:31	0.05
Outlet5_2	OUTFALL	0.01	0.08	249.65	0	02:30	0.08
Outlet6-1	OUTFALL	0.00	0.00	226.37	0	00:00	0.00
Outlet6-2	OUTFALL	0.00	0.05	227.11	0	02:30	0.05
Outlet6-3	OUTFALL	0.02	0.18	230.81	0	02:33	0.18

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.088	0.211	0	02:30	0.58	1.3	0.338
J10	JUNCTION	0.051	0.070	0	02:30	0.194	0.296	-0.038
J11	JUNCTION	0.057	0.128	0	02:30	0.425	0.721	-0.054
J12	JUNCTION	0.006	0.036	0	02:30	0.0645	0.18	0.045
J13	JUNCTION	0.008	0.020	0	02:29	0.0377	0.102	-0.033
J14	JUNCTION	0.000	0.020	0	02:30	0	0.102	0.011
J15	JUNCTION	0.047	0.047	0	02:30	0.177	0.177	0.005
J17	JUNCTION	0.008	0.008	0	02:30	0.0312	0.0312	-0.361
J18	JUNCTION	0.012	0.029	0	02:30	0.0461	0.126	0.129

J19	JUNCTION	0.008	0.016	0	02:30	0.038	0.0693	0.172
J2	JUNCTION	0.000	0.029	0	02:30	0	0.127	0.007
J20	JUNCTION	0.002	0.018	0	02:30	0.0112	0.0804	0.070
J21	JUNCTION	0.038	0.038	0	02:30	0.146	0.146	-0.275
J22	JUNCTION	0.077	0.118	0	02:30	0.292	0.467	-1.017
J23	JUNCTION	0.004	0.120	0	02:30	0.0454	0.517	0.955
J24	JUNCTION	0.010	0.010	0	02:30	0.0384	0.0384	-0.669
J25	JUNCTION	0.004	0.060	0	02:29	0.0393	0.266	0.448
J26	JUNCTION	0.183	0.183	0	02:30	1.11	1.11	-0.038
J27	JUNCTION	0.003	0.042	0	02:30	0.0292	0.176	0.318
J28	JUNCTION	0.004	0.175	0	02:33	0.0188	1.13	0.083
J29	JUNCTION	0.006	0.006	0	02:30	0.0231	0.0231	0.000
J3	JUNCTION	0.007	0.035	0	02:30	0.0646	0.173	0.535
J30	JUNCTION	0.006	0.016	0	02:30	0.0613	0.1	0.308
J31	JUNCTION	0.040	0.053	0	02:30	0.211	0.311	0.043
J32	JUNCTION	0.000	0.006	0	02:29	0	0.0231	-0.021
J33	JUNCTION	0.001	0.007	0	02:29	0.00385	0.0269	-0.373
J34	JUNCTION	0.129	0.129	0	02:30	0.763	0.763	0.105
J35	JUNCTION	0.059	0.059	0	02:30	0.371	0.371	-0.114
J36	JUNCTION	0.010	0.019	0	02:30	0.0385	0.0655	0.165
J37	JUNCTION	0.007	0.007	0	02:30	0.0269	0.0269	-0.194
J38	JUNCTION	0.003	0.023	0	02:30	0.0151	0.11	-0.051
J39	JUNCTION	0.003	0.020	0	02:30	0.0186	0.0948	0.064
J4	JUNCTION	0.000	0.084	0	02:31	0	0.56	0.005
J40	JUNCTION	0.017	0.017	0	02:30	0.0762	0.0762	-0.032
J41	JUNCTION	0.012	0.012	0	02:30	0.0461	0.0461	-0.660
J42	JUNCTION	0.016	0.016	0	02:30	0.0615	0.0615	-0.645
J43	JUNCTION	0.000	0.030	0	02:30	0	0.116	0.158
J44	JUNCTION	0.030	0.030	0	02:30	0.115	0.115	-0.199
J45	JUNCTION	0.016	0.016	0	02:30	0.0617	0.0617	-0.165
J46	JUNCTION	0.020	0.020	0	02:30	0.0772	0.0772	-0.135
J47	JUNCTION	0.000	0.183	0	02:30	0	1.12	0.032
J48	JUNCTION	0.003	0.009	0	02:30	0.0149	0.0419	0.109
J49	JUNCTION	0.000	0.011	0	02:25	0	0.0419	0.221
J5	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J50	JUNCTION	0.030	0.030	0	02:30	0.115	0.115	-0.085
J51	JUNCTION	0.048	0.058	0	02:30	0.184	0.226	-0.448
J52	JUNCTION	0.000	0.030	0	02:30	0	0.115	-0.271
J53	JUNCTION	0.007	0.037	0	02:30	0.0654	0.181	0.234
J54	JUNCTION	0.000	0.185	0	02:35	0	1.13	-0.080
J55	JUNCTION	0.001	0.042	0	02:31	0.00385	0.207	3.513
J56	JUNCTION	0.000	0.182	0	02:30	0	1.11	-0.008
J57	JUNCTION	0.000	0.176	0	02:31	0	1.11	0.011
J58	JUNCTION	0.000	0.176	0	02:31	0	1.11	-0.006
J59	JUNCTION	0.000	0.174	0	02:32	0	1.11	0.003
J6	JUNCTION	0.010	0.068	0	02:30	0.0798	0.451	0.111
J60	JUNCTION	0.006	0.042	0	02:30	0.0231	0.203	0.000
J61	JUNCTION	0.000	0.068	0	02:30	0	0.311	0.069
J62	JUNCTION	0.000	0.174	0	02:32	0	1.11	0.024
J63	JUNCTION	0.000	0.171	0	02:33	0	1.11	-0.021
J64	JUNCTION	0.028	0.028	0	02:30	0.108	0.108	-0.134
J65	JUNCTION	0.062	0.090	0	02:30	0.264	0.372	0.045
J66	JUNCTION	0.014	0.100	0	02:30	0.0539	0.426	-0.008
J67	JUNCTION	0.000	0.100	0	02:30	0	0.426	-0.056
J68	JUNCTION	0.000	0.099	0	02:30	0	0.426	0.063
J7	JUNCTION	0.003	0.003	0	03:00	0.0254	0.0254	0.057
J8	JUNCTION	0.010	0.012	0	02:30	0.0385	0.0639	-0.044
J82	JUNCTION	0.000	0.029	0	02:30	0	0.126	-0.172
J9	JUNCTION	0.000	0.012	0	02:30	0	0.0639	0.119
STM-MH-EX	JUNCTION	0.000	0.231	0	02:31	0	1.42	-0.257
J16	OUTFALL	0.003	0.050	0	02:30	0.0289	0.206	0.000
OF1	OUTFALL	0.004	0.004	0	02:30	0.0154	0.0154	0.000
OF2	OUTFALL	0.004	0.004	0	02:30	0.0154	0.0154	0.000
OF3	OUTFALL	0.000	0.099	0	02:30	0	0.426	0.000

OF4	OUTFALL	0.016	0.016	0	02:30	0.0616	0.0616	0.000
Outlet1	OUTFALL	0.000	0.230	0	02:32	0	1.43	0.000
Outlet2_1	OUTFALL	0.011	0.061	0	02:30	0.117	0.428	0.000
Outlet2_2	OUTFALL	0.010	0.134	0	02:30	0.159	0.92	0.000
Outlet2_3	OUTFALL	0.000	0.084	0	02:37	0	0.512	0.000
Outlet2_4	OUTFALL	0.000	0.059	0	02:31	0	0.265	0.000
Outlet2_5	OUTFALL	0.045	0.045	0	02:30	0.189	0.189	0.000
Outlet3	OUTFALL	0.006	0.089	0	02:31	0.0231	0.584	0.000
Outlet4	OUTFALL	0.004	0.072	0	02:30	0.0331	0.344	0.000
Outlet5_1	OUTFALL	0.003	0.045	0	02:31	0.0115	0.211	0.000
Outlet5_2	OUTFALL	0.000	0.037	0	02:30	0	0.181	0.000
Outlet6-1	OUTFALL	0.039	0.039	0	02:30	0.159	0.159	0.000
Outlet6-2	OUTFALL	0.002	0.020	0	02:30	0.00769	0.0731	0.000
Outlet6-3	OUTFALL	0.026	0.193	0	02:32	0.116	1.25	0.000

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J26	JUNCTION	0.11	0.055	0.295

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J16	48.84	0.005	0.050	0.206
OF1	22.07	0.001	0.004	0.015
OF2	21.90	0.001	0.004	0.015
OF3	39.09	0.013	0.099	0.426
OF4	27.37	0.003	0.016	0.062
Outlet1	81.34	0.021	0.230	1.427
Outlet2_1	77.59	0.007	0.061	0.428
Outlet2_2	96.66	0.011	0.134	0.920
Outlet2_3	63.97	0.010	0.084	0.512
Outlet2_4	53.01	0.006	0.059	0.265
Outlet2_5	45.14	0.005	0.045	0.189
Outlet3	79.30	0.009	0.089	0.584
Outlet4	66.51	0.006	0.072	0.344
Outlet5_1	57.60	0.004	0.045	0.211
Outlet5_2	48.93	0.005	0.037	0.181
Outlet6-1	39.40	0.005	0.039	0.159
Outlet6-2	28.85	0.003	0.020	0.073
Outlet6-3	53.01	0.028	0.193	1.249

System 52.81 0.144 1.249 7.267

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.029	0	02:30	1.25	0.17	0.20
C10	CHANNEL	0.020	0	02:30	0.19	0.00	0.12
C11	CHANNEL	0.070	0	02:30	0.54	0.01	0.14
C12	CHANNEL	0.125	0	02:30	0.40	0.01	0.24
C13	CONDUIT	0.003	0	03:00	0.33	0.02	0.10
C14	CONDUIT	0.019	0	02:30	0.55	0.31	0.28
C15	CHANNEL	0.047	0	02:30	0.63	0.01	0.12
C16	CHANNEL	0.008	0	02:30	0.14	0.01	0.18
C17	CONDUIT	0.016	0	02:30	0.75	0.11	0.21
C18	CHANNEL	0.017	0	02:31	0.14	0.04	0.30
C19	CHANNEL	0.038	0	02:30	0.42	0.01	0.20
C2	CONDUIT	0.029	0	02:31	1.10	0.05	0.56
C20	CHANNEL	0.117	0	02:30	0.45	0.03	0.42
C21	CHANNEL	0.010	0	02:30	0.26	0.00	0.08
C22	CONDUIT	0.059	0	02:31	0.92	0.33	0.42
C23	CHANNEL	0.056	0	02:29	0.45	0.01	0.25
C24	CONDUIT	0.041	0	02:30	0.88	0.26	0.34
C25	CONDUIT	0.084	0	02:37	1.28	1.28	0.88
C26	CONDUIT	0.014	0	02:33	0.55	0.14	0.23
C27	CHANNEL	0.052	0	02:30	0.77	0.00	0.09
C28	CHANNEL	0.125	0	02:30	0.86	0.01	0.15
C29	CHANNEL	0.058	0	02:30	0.31	0.01	0.20
C3	CHANNEL	0.084	0	02:31	0.80	0.02	0.19
C30	CHANNEL	0.017	0	02:30	0.34	0.00	0.13
C31	CONDUIT	0.020	0	02:30	0.98	0.08	0.19
C32	CHANNEL	0.016	0	02:30	0.17	0.01	0.20
C33	CHANNEL	0.012	0	02:30	0.14	0.01	0.19
C34	CHANNEL	0.030	0	02:30	0.33	0.01	0.16
C35	CHANNEL	0.020	0	02:30	0.49	0.00	0.09
C36	CHANNEL	0.016	0	02:30	0.41	0.00	0.09
C37	CHANNEL	0.029	0	02:30	0.85	0.01	0.13
C38	CONDUIT	0.011	0	02:25	0.62	0.04	0.18
C39	CHANNEL	0.006	0	02:29	0.31	0.00	0.06
C4	CHANNEL	0.006	0	02:30	0.32	0.00	0.09
C40	CONDUIT	0.067	0	02:30	0.80	0.03	0.21
C41	CONDUIT	0.030	0	02:30	1.33	0.10	0.20
C42	CONDUIT	0.008	0	02:30	0.71	0.03	0.14
C43	CHANNEL	0.023	0	02:30	0.35	0.00	0.15
C44	CHANNEL	0.036	0	02:31	0.32	0.01	0.18
C45	CHANNEL	0.030	0	02:30	0.63	0.00	0.10
C46	CONDUIT	0.030	0	02:30	1.08	0.08	0.24
C47	CHANNEL	0.037	0	02:30	1.03	0.00	0.08
C48	CHANNEL	0.018	0	02:30	1.01	0.00	0.04
C5	CONDUIT	0.183	0	02:30	1.64	0.45	0.66
C50	CHANNEL	0.042	0	02:31	0.16	0.01	0.33
C51	CONDUIT	0.041	0	02:31	0.45	0.16	0.55
C52	CONDUIT	0.176	0	02:31	1.60	0.48	0.65
C53	CONDUIT	0.174	0	02:32	1.51	0.48	0.68
C54	CONDUIT	0.171	0	02:33	1.46	0.66	0.69
C55	CHANNEL	0.182	0	02:30	0.77	0.01	0.30
C56	CHANNEL	0.176	0	02:31	0.80	0.01	0.30
C57	CHANNEL	0.174	0	02:32	0.71	0.01	0.31

C58	CHANNEL	0.171	0	02:33	0.79	0.02	0.27
C59	CHANNEL	0.028	0	02:30	0.35	0.00	0.32
C6	CONDUIT	0.175	0	02:33	1.01	0.05	0.20
C60	CONDUIT	0.086	0	02:30	1.51	0.15	0.52
C61	CHANNEL	0.100	0	02:30	0.64	0.01	0.32
C62	CONDUIT	0.099	0	02:30	1.66	0.24	0.40
C63	CHANNEL	0.099	0	02:30	2.30	0.01	0.13
C7	CONDUIT	0.006	0	02:29	0.50	0.05	0.14
C8	CONDUIT	0.012	0	02:27	0.78	0.16	0.16
C9	CHANNEL	0.012	0	02:30	0.19	0.00	0.09
CW-1	CONDUIT	0.202	0	02:32	1.26	0.06	0.23
CW-2	CONDUIT	0.230	0	02:32	1.13	0.09	0.22
CW-3	CONDUIT	0.062	0	02:32	1.04	0.69	0.50
CW-4	CONDUIT	0.032	0	02:32	0.85	0.41	0.36
CW-5	CONDUIT	0.185	0	02:35	1.35	0.45	0.50
CW-6	CONDUIT	0.011	0	02:30	0.51	0.08	0.24
DI4	CHANNEL	0.000	0	00:00	0.00	0.00	0.03

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.00	0.27
C10	1.00	0.00	0.00	0.00	0.86	0.13	0.00	0.00	0.84	0.00
C11	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.91	0.00
C12	1.00	0.00	0.00	0.00	0.83	0.17	0.00	0.00	0.73	0.00
C13	1.00	0.00	0.28	0.00	0.72	0.00	0.00	0.00	0.00	0.55
C14	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.19
C15	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C16	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.54	0.00
C17	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.00	0.76
C18	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.61	0.00
C19	1.00	0.00	0.00	0.00	0.53	0.47	0.00	0.00	0.39	0.00
C2	1.00	0.00	0.02	0.00	0.92	0.05	0.00	0.00	0.98	0.00
C20	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.94	0.00
C21	1.00	0.00	0.00	0.00	0.98	0.01	0.00	0.00	0.93	0.00
C22	1.00	0.01	0.00	0.00	0.86	0.13	0.00	0.00	0.00	0.36
C23	1.00	0.00	0.00	0.00	0.73	0.27	0.00	0.00	0.69	0.00
C24	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.93
C25	1.00	0.01	0.00	0.00	0.83	0.16	0.00	0.00	0.00	0.54
C26	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.46
C27	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.00
C28	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.90	0.00
C3	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C30	1.00	0.00	0.00	0.00	0.78	0.22	0.00	0.00	0.25	0.00
C31	1.00	0.00	0.20	0.00	0.76	0.04	0.00	0.00	0.00	0.97
C32	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.94	0.00
C33	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.94	0.00
C34	1.00	0.00	0.00	0.00	0.34	0.66	0.00	0.00	0.31	0.00
C35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C37	1.00	0.01	0.00	0.00	0.12	0.87	0.00	0.00	0.10	0.00
C38	1.00	0.01	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.27
C39	1.00	0.00	0.20	0.00	0.80	0.00	0.00	0.00	0.98	0.00
C4	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.25	0.00
C40	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.15
C41	1.00	0.01	0.02	0.00	0.89	0.08	0.00	0.00	0.00	0.94

C42	1.00	0.00	0.01	0.00	0.85	0.14	0.00	0.00	0.00	0.73
C43	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.97	0.00
C44	1.00	0.00	0.00	0.00	0.49	0.50	0.00	0.00	0.57	0.00
C45	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.97	0.00
C46	1.00	0.00	0.01	0.00	0.88	0.10	0.00	0.00	0.00	0.52
C47	1.00	0.00	0.00	0.00	0.64	0.36	0.00	0.00	0.50	0.00
C48	1.00	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.74	0.00
C5	1.00	0.00	0.00	0.00	0.52	0.48	0.00	0.00	0.00	0.90
C50	1.00	0.01	0.07	0.00	0.93	0.00	0.00	0.00	0.53	0.00
C51	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
C52	1.00	0.00	0.00	0.00	0.52	0.48	0.00	0.00	0.00	0.47
C53	1.00	0.01	0.00	0.00	0.60	0.39	0.00	0.00	0.00	0.58
C54	1.00	0.01	0.00	0.00	0.71	0.28	0.00	0.00	0.00	0.40
C55	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99	0.00
C56	1.00	0.00	0.16	0.00	0.83	0.01	0.00	0.00	0.99	0.00
C57	1.00	0.01	0.07	0.00	0.91	0.01	0.00	0.00	0.99	0.00
C58	1.00	0.00	0.09	0.00	0.90	0.00	0.00	0.00	0.96	0.00
C59	1.00	0.00	0.00	0.00	0.79	0.21	0.00	0.00	0.68	0.00
C6	1.00	0.17	0.00	0.00	0.83	0.00	0.00	0.00	0.36	0.00
C60	1.00	0.00	0.01	0.00	0.71	0.28	0.00	0.00	0.00	1.00
C61	1.00	0.00	0.00	0.00	0.59	0.41	0.00	0.00	0.48	0.00
C62	1.00	0.00	0.03	0.00	0.60	0.37	0.00	0.00	0.00	0.99
C63	1.00	0.01	0.00	0.00	0.32	0.67	0.00	0.00	0.00	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.10
C8	1.00	0.00	0.01	0.00	0.97	0.01	0.00	0.00	0.00	0.31
C9	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.80	0.00
CW-1	1.00	0.00	0.01	0.00	0.73	0.26	0.00	0.00	0.00	0.35
CW-2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.85
CW-3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.62
CW-4	1.00	0.01	0.00	0.00	0.98	0.01	0.00	0.00	0.00	0.13
CW-5	1.00	0.00	0.00	0.00	0.93	0.06	0.00	0.00	0.00	0.38
CW-6	1.00	0.00	0.54	0.00	0.46	0.00	0.00	0.00	0.00	0.97
DI4	1.00	0.28	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00

****
Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C25	0.01	0.93	0.01	0.64	0.01
C5	0.01	0.11	0.01	0.01	0.01
C52	0.01	0.12	0.01	0.01	0.01
C53	0.01	0.14	0.01	0.01	0.01
C54	0.01	0.15	0.01	0.01	0.01

Analysis begun on: Wed Sep 22 11:08:59 2021
Analysis ended on: Wed Sep 22 11:09:10 2021
Total elapsed time: 00:00:11

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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WARNING 03: negative offset ignored for Link C37
WARNING 03: negative offset ignored for Link CW-1
WARNING 02: maximum depth increased for Node J29
WARNING 02: maximum depth increased for Node J30

*************
Element Count
*************
Number of rain gages ...... 7
Number of subcatchments ... 113
Number of nodes ........... 80
Number of links ........... 63
Number of pollutants ...... 0
Number of land uses ....... 0


****************
Raingage Summary
****************
                                                  Data       Recording
Name                 Data Source                  Type       Interval
----------------------------------------------------------------------
100Year_12Hour_AES(Bloor,TRCA) 100Year_12Hour_AES(Bloor,TRCA) INTENSITY   15 min.
100Year_6Hour_AES(Bloor,TRCA) 100Year_6Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_12Hour_AES(Bloor,TRCA) 10Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_6Hour_AES(Bloor,TRCA) 10Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.
25mm-4hr-Chicago     25mm-4h-Chicago              INTENSITY   10 min.
50Year_12Hour_AES(Bloor,TRCA) 50Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
50Year_6Hour_AES(Bloor,TRCA) 50Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.


*********************
Subcatchment Summary
*********************
Name                         Area     Width   %Imperv    %Slope Rain Gage            Outlet
-------------------------------------------------------------------------------------------------
D1                           0.30     13.33      1.00    0.3500 10Year_6Hour_AES(Bloor,TRCA) J1
D10                          0.28      9.82      1.00    1.8000 10Year_6Hour_AES(Bloor,TRCA) Outlet2_1
D11                          0.11      9.56      1.00    1.0000 10Year_6Hour_AES(Bloor,TRCA) Outlet2_5
D12                          0.64     15.02      1.00    1.2000 10Year_6Hour_AES(Bloor,TRCA) Outlet2_2
D13                          0.11      5.79      1.00    1.6000 10Year_6Hour_AES(Bloor,TRCA) Outlet2_4
D15                          0.07      6.36      1.00    1.0000 10Year_6Hour_AES(Bloor,TRCA) J48
D16                          0.24     15.48      1.00    0.7000 10Year_6Hour_AES(Bloor,TRCA) J6
D17                          0.14     16.87      1.00    1.4000 10Year_6Hour_AES(Bloor,TRCA) J23
D2                           0.02      6.37      1.00    0.7700 10Year_6Hour_AES(Bloor,TRCA) J18
D2_1                         0.05      6.20      1.00    0.7700 10Year_6Hour_AES(Bloor,TRCA) J18
D20                          0.07      6.67      1.00    0.3500 10Year_6Hour_AES(Bloor,TRCA) J3
D21                          0.07      6.36      1.00    1.5000 10Year_6Hour_AES(Bloor,TRCA) J61
D22                          0.08      7.62      1.00    0.7000 10Year_6Hour_AES(Bloor,TRCA) J3
D23                          0.05      4.17      1.00    0.4000 10Year_6Hour_AES(Bloor,TRCA) J61
D24                          0.21      5.47      1.00    4.4200 10Year_6Hour_AES(Bloor,TRCA) J43
D25                          0.21      7.00      1.00    4.0000 10Year_6Hour_AES(Bloor,TRCA) Outlet5_2
D27                          0.02      4.44      1.00    6.0000 10Year_6Hour_AES(Bloor,TRCA) Outlet6-2
D28                          0.01      4.54      1.00    3.7000 10Year_6Hour_AES(Bloor,TRCA) J39
D29                          0.05      3.13      1.00    7.0000 10Year_6Hour_AES(Bloor,TRCA) J33
D3                           0.07      6.36      1.00    1.0000 10Year_6Hour_AES(Bloor,TRCA) J19
D4                           0.06     11.54      1.00    0.4000 10Year_6Hour_AES(Bloor,TRCA) J9
D40                          0.03      9.09      1.00    2.0000 10Year_6Hour_AES(Bloor,TRCA) Outlet5_1
D41                          0.01      4.35      1.00    2.0000 10Year_6Hour_AES(Bloor,TRCA) J25
D5                           0.08      5.00      1.00    1.0000 10Year_6Hour_AES(Bloor,TRCA) J16
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D6	0.05	6.25	1.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J7
D7	0.10	6.25	1.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	J30
D8	0.09	5.63	1.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J22
D9	0.14	4.38	1.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J27
EXT1	1.08	83.08	7.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J1
EXT10	0.54	28.42	7.00	16.0000	10Year_6Hour_AES(Bloor,TRCA)	J14
EXT2	0.64	42.67	7.00	1.8000	10Year_6Hour_AES(Bloor,TRCA)	J11
EXT3	0.45	34.62	7.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J11
EXT4	0.10	18.18	7.00	3.0000	10Year_6Hour_AES(Bloor,TRCA)	J10
EXT5	0.24	10.91	7.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J31
EXT6	0.26	15.76	7.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	J34
EXT7	0.82	34.17	7.00	0.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
EXT8	0.60	46.15	7.00	0.2000	10Year_6Hour_AES(Bloor,TRCA)	J35
EXT9	2.59	92.50	7.00	7.3000	10Year_6Hour_AES(Bloor,TRCA)	J49
G	0.05	5.00	1.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J31
G1	0.03	2.03	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
G10	0.02	13.33	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet3
G2	0.03	1.86	1.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
G3	0.07	2.09	1.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J22
G4	0.02	4.44	1.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
G5	0.04	5.88	1.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
G6	0.05	2.63	1.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J4
G7	0.04	3.33	1.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J2
G8	0.03	3.61	1.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J26
P1	0.05	3.13	95.00	1.3400	10Year_6Hour_AES(Bloor,TRCA)	J21
R1	0.06	7.50	95.00	0.3000	10Year_6Hour_AES(Bloor,TRCA)	J1
R10	0.04	5.33	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
R12	0.02	10.99	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
R13_14	0.08	5.00	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
R15	0.07	4.38	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
R16	0.04	11.98	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J22
R17_1	0.03	4.69	95.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J22
R17_2	0.10	4.76	95.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J31
R18	0.13	4.56	25.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J22
R19	0.18	4.22	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
R2	0.05	6.25	95.00	0.3000	10Year_6Hour_AES(Bloor,TRCA)	J18
R20	0.13	4.35	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J4
R22	0.07	4.67	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J34
R23_25	0.07	4.66	95.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J35
R24	0.07	4.52	95.00	0.7000	10Year_6Hour_AES(Bloor,TRCA)	J35
R26	0.04	38.46	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J6
R26_2	0.02	19.23	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet3
R27	0.03	19.48	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J42
R28	0.02	14.29	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet3
R29	0.03	5.36	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J42
R3	0.09	6.82	95.00	0.6000	10Year_6Hour_AES(Bloor,TRCA)	J10
R30	0.02	3.57	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J45
R31	0.02	3.57	95.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J45
R32	0.02	3.57	95.00	0.3500	10Year_6Hour_AES(Bloor,TRCA)	J42
R33	0.04	4.00	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J46
R34	0.04	4.00	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J41
R35_2	0.02	6.87	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	OF1
R36	0.11	4.07	95.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J44
R37	0.13	5.66	95.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J50
R38	0.03	6.00	95.00	3.5000	10Year_6Hour_AES(Bloor,TRCA)	J60
R39	0.14	5.00	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J13
R39_1	0.04	5.97	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J59
R4	0.07	5.30	95.00	0.6000	10Year_6Hour_AES(Bloor,TRCA)	J10
R40_2	0.09	5.08	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R40_3	0.03	4.48	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J59
R40_4	0.07	6.36	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J14
R41_1	0.04	5.33	90.00	3.8000	10Year_6Hour_AES(Bloor,TRCA)	OF3
R41_2	0.03	5.00	90.00	2.0000	10Year_6Hour_AES(Bloor,TRCA)	J37
R41_4	0.12	5.46	90.00	5.7000	10Year_6Hour_AES(Bloor,TRCA)	J49

R41_5	0.05	5.00	90.00	6.0000	10Year_6Hour_AES(Bloor,TRCA)	J40
R42_1	0.04	5.33	90.00	3.8000	10Year_6Hour_AES(Bloor,TRCA)	OF3
R42_3	0.08	5.00	90.00	3.2500	10Year_6Hour_AES(Bloor,TRCA)	J29
R42_4	0.11	5.00	90.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J28
R6	0.02	7.55	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J9
R7	0.02	6.90	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	OF2
R8	0.04	6.67	95.00	1.3000	10Year_6Hour_AES(Bloor,TRCA)	J8
R9	0.08	5.93	95.00	1.1000	10Year_6Hour_AES(Bloor,TRCA)	J15
S1	0.08	4.44	1.00	7.0000	10Year_6Hour_AES(Bloor,TRCA)	J29
S3	0.05	3.13	95.00	0.9000	10Year_6Hour_AES(Bloor,TRCA)	J26
S4	0.07	4.67	1.00	3.0000	10Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
SW1_1	0.01	3.26	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J18
SW10	0.04	3.33	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J2
SW12	0.04	3.64	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J45
SW13	0.03	2.50	95.00	0.5000	10Year_6Hour_AES(Bloor,TRCA)	J46
SW17	0.04	3.33	95.00	1.2800	10Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
SW2	0.02	2.63	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J19
SW20	0.02	2.50	95.00	1.1500	10Year_6Hour_AES(Bloor,TRCA)	J5
SW21	0.05	3.13	95.00	1.5000	10Year_6Hour_AES(Bloor,TRCA)	J24
SW3	0.03	3.11	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J17
SW5	0.04	2.71	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J15
SW6	0.05	3.09	95.00	1.0000	10Year_6Hour_AES(Bloor,TRCA)	J21
SW7	0.09	2.69	95.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J22
SW8	0.08	3.16	95.00	1.7000	10Year_6Hour_AES(Bloor,TRCA)	J31
SW9	0.06	3.16	95.00	1.2000	10Year_6Hour_AES(Bloor,TRCA)	J4

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
DICB1	JUNCTION	259.42	1.50	0.0	
J1	JUNCTION	260.21	1.50	0.0	
J10	JUNCTION	262.80	0.70	0.0	
J11	JUNCTION	262.28	0.70	0.0	
J12	JUNCTION	257.12	0.90	0.0	
J13	JUNCTION	249.99	0.70	0.0	
J14	JUNCTION	231.59	0.70	0.0	
J15	JUNCTION	264.09	0.50	0.0	
J17	JUNCTION	263.22	0.90	0.0	
J18	JUNCTION	261.56	0.90	0.0	
J19	JUNCTION	262.06	0.90	0.0	
J2	JUNCTION	262.68	0.50	0.0	
J20	JUNCTION	261.97	0.90	0.0	
J21	JUNCTION	264.06	0.50	0.0	
J22	JUNCTION	262.52	0.50	0.0	
J23	JUNCTION	260.55	0.90	0.0	
J24	JUNCTION	264.60	0.90	0.0	
J25	JUNCTION	249.62	0.90	0.0	
J26	JUNCTION	262.66	0.50	0.0	
J27	JUNCTION	257.66	0.50	0.0	
J28	JUNCTION	244.24	0.30	0.0	
J29	JUNCTION	231.05	0.90	0.0	
J3	JUNCTION	261.63	0.60	0.0	
J30	JUNCTION	262.74	0.45	0.0	
J31	JUNCTION	262.25	0.70	0.0	
J32	JUNCTION	257.45	0.50	0.0	
J33	JUNCTION	231.15	0.70	0.0	
J34	JUNCTION	261.90	0.70	0.0	
J35	JUNCTION	261.97	0.50	0.0	
J36	JUNCTION	232.08	0.70	0.0	
J37	JUNCTION	231.00	0.70	0.0	

J38	JUNCTION	230.93	0.70	0.0
J39	JUNCTION	230.19	0.70	0.0
J4	JUNCTION	260.94	0.50	0.0
J40	JUNCTION	229.41	0.70	0.0
J41	JUNCTION	262.00	0.90	0.0
J42	JUNCTION	261.74	0.50	0.0
J43	JUNCTION	257.37	0.90	0.0
J44	JUNCTION	262.00	0.90	0.0
J45	JUNCTION	261.82	0.50	0.0
J46	JUNCTION	262.13	0.90	0.0
J47	JUNCTION	260.50	0.50	0.0
J48	JUNCTION	261.73	0.50	0.0
J49	JUNCTION	241.06	0.70	0.0
J5	JUNCTION	264.15	0.70	0.0
J50	JUNCTION	260.76	0.60	0.0
J51	JUNCTION	239.73	0.70	0.0
J54	JUNCTION	236.80	0.70	0.0
J55	JUNCTION	235.75	0.70	0.0
J56	JUNCTION	234.13	0.70	0.0
J57	JUNCTION	233.21	0.70	0.0
J58	JUNCTION	231.74	0.70	0.0
J59	JUNCTION	230.65	0.70	0.0
J6	JUNCTION	260.83	0.90	0.0
J60	JUNCTION	250.16	0.90	0.0
J61	JUNCTION	261.50	0.60	0.0
J62	JUNCTION	228.45	0.70	0.0
J63	JUNCTION	227.47	0.70	0.0
J7	JUNCTION	263.45	0.70	0.0
J8	JUNCTION	263.37	0.90	0.0
J82	JUNCTION	261.20	0.90	0.0
J9	JUNCTION	262.95	0.90	0.0
STM-MH-EX	JUNCTION	258.42	4.38	0.0
J16	OUTFALL	263.13	0.50	0.0
OF1	OUTFALL	0.00	0.00	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	0.00	0.00	0.0
OF4	OUTFALL	225.00	0.70	0.0
Outlet1	OUTFALL	258.06	1.00	0.0
Outlet2_1	OUTFALL	256.93	0.70	0.0
Outlet2_2	OUTFALL	257.00	0.70	0.0
Outlet2_3	OUTFALL	257.31	0.45	0.0
Outlet2_4	OUTFALL	256.50	0.50	0.0
Outlet2_5	OUTFALL	0.00	0.00	0.0
Outlet3	OUTFALL	260.20	0.61	0.0
Outlet4	OUTFALL	261.10	0.50	0.0
Outlet5_1	OUTFALL	249.70	0.90	0.0
Outlet5_2	OUTFALL	250.23	0.60	0.0
Outlet6-1	OUTFALL	226.62	0.90	0.0
Outlet6-2	OUTFALL	226.86	0.70	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J18	J82	CONDUIT	21.9	1.6441	0.0130
C10	J14	J59	CONDUIT	9.8	9.6363	0.0130
C11	J10	J11	CONDUIT	40.5	1.2853	0.0270
C12	J11	J1	CONDUIT	131.5	1.5743	0.0270
C13	J25	Outlet5_1	CONDUIT	5.1	-1.5688	0.0270
C14	J28	J29	CONDUIT	185.3	7.1363	0.0270
C15	J15	J16	CONDUIT	145.3	0.6607	0.0270
C16	J17	J19	CONDUIT	97.3	1.1892	0.0270

C17	J19	J20	CONDUIT	10.0	0.9400	0.0130
C18	J20	J18	CONDUIT	60.7	0.6738	0.0270
C19	J21	J22	CONDUIT	137.6	1.1193	0.0270
C2	J23	J47	CONDUIT	11.4	0.4398	0.0130
C20	J22	J27	CONDUIT	224.2	2.1682	0.0270
C21	J24	J30	CONDUIT	143.1	1.2997	0.0270
C22	J29	Outlet6-1	CONDUIT	145.0	3.0566	0.0270
C23	J4	Outlet2_4	CONDUIT	249.7	1.7784	0.0270
C24	J27	J32	CONDUIT	35.5	0.5916	0.0270
C25	J32	Outlet2_3	CONDUIT	24.8	0.5645	0.0130
C26	J30	J31	CONDUIT	27.6	1.7756	0.0130
C27	J31	Outlet2_1	CONDUIT	264.6	2.0110	0.0270
C28	J34	Outlet2_2	CONDUIT	420.5	1.1654	0.0270
C29	J35	J6	CONDUIT	140.6	0.8108	0.0270
C3	J9	J10	CONDUIT	37.8	0.3968	0.0130
C30	J26	J23	CONDUIT	142.9	1.4764	0.0270
C31	J49	J51	CONDUIT	12.0	11.1520	0.0130
C32	J42	J3	CONDUIT	60.0	0.1833	0.0270
C33	J41	J3	CONDUIT	105.4	0.3510	0.0270
C34	J44	J43	CONDUIT	156.9	2.9554	0.0270
C35	J46	J61	CONDUIT	109.9	0.5733	0.0270
C36	J45	J61	CONDUIT	61.3	0.5220	0.0270
C37	J82	DICB1	CONDUIT	43.8	4.0673	0.0270
C4	J2	J48	CONDUIT	109.6	0.8668	0.0270
C40	J61	Outlet4	CONDUIT	2.1	19.4029	0.0270
C41	J43	J12	CONDUIT	7.1	3.4528	0.0240
C42	J47	Outlet3	CONDUIT	5.1	3.6918	0.0250
C43	J37	J38	CONDUIT	11.0	0.6364	0.0130
C44	J12	J60	CONDUIT	108.7	6.4161	0.0270
C45	J50	Outlet5_2	CONDUIT	268.0	3.9316	0.0270
C48	J39	J40	CONDUIT	9.5	8.2383	0.0130
C49	J38	J39	CONDUIT	19.5	3.7976	0.0270
C5	J13	J14	CONDUIT	239.1	7.7174	0.0270
C50	J40	Outlet6-2	CONDUIT	47.4	5.3875	0.0270
C51	DICB1	STM-MH-EX	CONDUIT	3.0	35.3553	0.0130
C52	J54	J55	CONDUIT	11.5	9.1687	0.0130
C53	J56	J57	CONDUIT	14.8	6.2283	0.0130
C54	J51	J54	CONDUIT	34.7	8.4667	0.0270
C55	J55	J56	CONDUIT	25.4	6.3884	0.0270
C56	J57	J36	CONDUIT	29.3	3.8608	0.0270
C57	J36	J58	CONDUIT	10.0	3.4020	0.0130
C58	J58	J33	CONDUIT	20.1	2.9337	0.0270
C59	J59	J62	CONDUIT	21.4	10.3254	0.0270
C60	J62	J63	CONDUIT	12.3	7.9929	0.0130
C61	J63	OF4	CONDUIT	18.1	13.7443	0.0270
C7	J7	J8	CONDUIT	18.9	0.4233	0.0240
C8	J60	J25	CONDUIT	27.3	1.9784	0.0130
C9	J8	J9	CONDUIT	44.1	0.9524	0.0270
CW-1	J1	STM-MH-EX	CONDUIT	80.0	2.2381	0.0240
CW-2	STM-MH-EX	Outlet1	CONDUIT	41.1	0.8759	0.0130
CW-3	J6	J23	CONDUIT	39.4	0.7103	0.0130
CW-4	J3	J61	CONDUIT	15.3	0.8475	0.0130
CW-5	J33	J29	CONDUIT	14.6	0.6849	0.0130
CW-6	J48	J4	CONDUIT	44.2	1.7876	0.0130
DI4	J5	J7	CONDUIT	71.7	0.9763	0.0270

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.45	0.16	0.11	0.45	1	0.37

C10	CIRCULAR	0.45	0.16	0.11	0.45	1	0.89
C11	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.95
C12	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	5.47
C13	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	9.70
C14	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	1.91
C15	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.69
C16	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	8.45
C17	CIRCULAR	0.45	0.16	0.11	0.45	1	0.28
C18	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	6.36
C19	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.20
C2	CIRCULAR	0.38	0.11	0.09	0.38	1	0.12
C20	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	3.06
C21	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	0.81
C22	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.54
C23	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.77
C24	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	1.20
C25	CIRCULAR	0.45	0.16	0.11	0.45	1	0.21
C26	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
C27	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	6.19
C28	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.71
C29	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.87
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.18
C30	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.52
C31	CIRCULAR	0.45	0.16	0.11	0.45	1	0.95
C32	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	0.89
C33	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.23
C34	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.32
C35	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.57
C36	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.50
C37	Ditch3	0.38	0.88	0.22	3.75	1	2.42
C4	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.93
C40	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	6.87
C41	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C42	TRAPEZOIDAL	0.50	0.75	0.27	2.50	1	2.43
C43	CIRCULAR	0.45	0.16	0.11	0.45	1	0.23
C44	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	19.62
C45	TRAPEZOIDAL	0.60	1.68	0.35	4.60	1	6.13
C48	CIRCULAR	0.45	0.16	0.11	0.45	1	0.82
C49	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.50
C5	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.12
C50	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	10.13
C51	CIRCULAR	0.30	0.07	0.07	0.30	1	0.58
C52	CIRCULAR	0.45	0.16	0.11	0.45	1	0.86
C53	CIRCULAR	0.45	0.16	0.11	0.45	1	0.71
C54	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.69
C55	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	11.03
C56	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.57
C57	CIRCULAR	0.45	0.16	0.11	0.45	1	0.53
C58	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	7.47
C59	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	14.02
C60	CIRCULAR	0.45	0.16	0.11	0.45	1	0.81
C61	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	16.17
C7	CIRCULAR	0.45	0.16	0.11	0.45	1	0.10
C8	CIRCULAR	0.45	0.16	0.11	0.45	1	0.40
C9	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	7.56
CW-1	CIRCULAR	1.20	1.13	0.30	1.20	1	3.16
CW-2	RECT_CLOSED	1.00	0.92	0.24	0.92	1	2.54
CW-3	CIRCULAR	0.60	0.28	0.15	0.60	1	0.52
CW-4	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
CW-5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.51
CW-6	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
DI4	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.31

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Transect Summary
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Transect Ditch1
Area:
            0.0016     0.0062     0.0123     0.0191     0.0265
            0.0346     0.0432     0.0525     0.0625     0.0730
            0.0842     0.0960     0.1084     0.1214     0.1351
            0.1494     0.1643     0.1798     0.1960     0.2128
            0.2302     0.2482     0.2669     0.2862     0.3061
            0.3266     0.3478     0.3696     0.3920     0.4150
            0.4387     0.4630     0.4879     0.5134     0.5396
            0.5664     0.5937     0.6217     0.6503     0.6795
            0.7093     0.7397     0.7708     0.8024     0.8346
            0.8671     0.8999     0.9329     0.9663     1.0000
Hrad:
            0.0180     0.0387     0.0679     0.0957     0.1216
            0.1462     0.1697     0.1924     0.2143     0.2357
            0.2566     0.2770     0.2972     0.3170     0.3366
            0.3559     0.3751     0.3941     0.4129     0.4316
            0.4502     0.4687     0.4871     0.5054     0.5236
            0.5418     0.5598     0.5779     0.5958     0.6137
            0.6316     0.6495     0.6672     0.6850     0.7028
            0.7209     0.7389     0.7569     0.7749     0.7928
            0.8107     0.8286     0.8464     0.8642     0.8868
            0.9131     0.9392     0.9652     0.9910     1.0000
Width:
            0.0915     0.1662     0.1887     0.2069     0.2250
            0.2432     0.2614     0.2796     0.2978     0.3159
            0.3341     0.3523     0.3705     0.3887     0.4068
            0.4250     0.4432     0.4614     0.4796     0.4978
            0.5159     0.5341     0.5523     0.5705     0.5887
            0.6068     0.6250     0.6432     0.6614     0.6796
            0.6977     0.7159     0.7341     0.7523     0.7703
            0.7881     0.8058     0.8234     0.8411     0.8587
            0.8763     0.8940     0.9116     0.9292     0.9417
            0.9501     0.9584     0.9668     0.9752     1.0000

Transect Ditch2
Area:
            0.0008     0.0045     0.0092     0.0145     0.0205
            0.0272     0.0346     0.0426     0.0513     0.0607
            0.0708     0.0815     0.0929     0.1050     0.1177
            0.1311     0.1452     0.1599     0.1754     0.1914
            0.2082     0.2256     0.2436     0.2622     0.2816
            0.3015     0.3221     0.3434     0.3653     0.3879
            0.4113     0.4355     0.4606     0.4864     0.5132
            0.5407     0.5691     0.5983     0.6284     0.6592
            0.6909     0.7232     0.7564     0.7903     0.8246
            0.8592     0.8940     0.9291     0.9644     1.0000
Hrad:
            0.0150     0.0373     0.0659     0.0920     0.1163
            0.1393     0.1614     0.1828     0.2037     0.2242
            0.2443     0.2641     0.2837     0.3031     0.3224
            0.3415     0.3604     0.3793     0.3981     0.4168
            0.4365     0.4556     0.4746     0.4934     0.5122
            0.5309     0.5496     0.5682     0.5867     0.6024
            0.6165     0.6308     0.6454     0.6603     0.6752
            0.6904     0.7057     0.7212     0.7368     0.7536
            0.7711     0.7886     0.8062     0.8250     0.8546
            0.8840     0.9133     0.9423     0.9712     1.0000
Width:
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            0.0567     0.1218     0.1406     0.1594     0.1782
            0.1970     0.2158     0.2346     0.2534     0.2722
            0.2911     0.3099     0.3287     0.3475     0.3663
            0.3851     0.4039     0.4227     0.4415     0.4603
            0.4778     0.4958     0.5139     0.5321     0.5502
            0.5683     0.5864     0.6046     0.6227     0.6441
            0.6674     0.6906     0.7139     0.7372     0.7605
            0.7837     0.8070     0.8303     0.8536     0.8755
            0.8967     0.9179     0.9390     0.9587     0.9656
            0.9725     0.9794     0.9862     0.9931     1.0000

Transect Ditch3
Area:
            0.0017     0.0053     0.0108     0.0182     0.0266
            0.0355     0.0451     0.0551     0.0657     0.0769
            0.0886     0.1009     0.1137     0.1271     0.1410
            0.1555     0.1705     0.1861     0.2023     0.2190
            0.2363     0.2542     0.2730     0.2925     0.3128
            0.3339     0.3557     0.3784     0.4018     0.4260
            0.4509     0.4766     0.5030     0.5296     0.5566
            0.5838     0.6114     0.6393     0.6675     0.6960
            0.7249     0.7542     0.7837     0.8136     0.8438
            0.8744     0.9053     0.9365     0.9681     1.0000
Hrad:
            0.0212     0.0392     0.0565     0.0753     0.1029
            0.1291     0.1542     0.1783     0.2016     0.2243
            0.2464     0.2680     0.2891     0.3098     0.3302
            0.3502     0.3699     0.3894     0.4087     0.4277
            0.4466     0.4605     0.4741     0.4879     0.5019
            0.5162     0.5308     0.5457     0.5607     0.5758
            0.5910     0.6063     0.6291     0.6537     0.6780
            0.7017     0.7244     0.7468     0.7690     0.7910
            0.8127     0.8343     0.8556     0.8767     0.8977
            0.9185     0.9391     0.9596     0.9799     1.0000
Width:
            0.0839     0.1424     0.2010     0.2532     0.2705
            0.2877     0.3050     0.3222     0.3395     0.3567
            0.3740     0.3912     0.4085     0.4257     0.4430
            0.4604     0.4779     0.4953     0.5128     0.5302
            0.5477     0.5716     0.5962     0.6207     0.6453
            0.6698     0.6940     0.7181     0.7421     0.7662
            0.7902     0.8143     0.8267     0.8356     0.8446
            0.8540     0.8645     0.8749     0.8853     0.8957
            0.9062     0.9166     0.9270     0.9374     0.9479
            0.9583     0.9687     0.9791     0.9896     1.0000

Transect Ditch4
Area:
            0.0026     0.0072     0.0124     0.0184     0.0251
            0.0324     0.0405     0.0493     0.0588     0.0690
            0.0799     0.0915     0.1038     0.1168     0.1305
            0.1448     0.1599     0.1757     0.1923     0.2095
            0.2276     0.2464     0.2658     0.2858     0.3064
            0.3275     0.3493     0.3716     0.3945     0.4180
            0.4421     0.4667     0.4920     0.5178     0.5442
            0.5712     0.5988     0.6270     0.6558     0.6852
            0.7152     0.7458     0.7768     0.8080     0.8395
            0.8711     0.9030     0.9351     0.9675     1.0000
Hrad:
            0.0209     0.0491     0.0744     0.0976     0.1194
            0.1402     0.1603     0.1798     0.1988     0.2175
            0.2359     0.2542     0.2723     0.2903     0.3080
            0.3257     0.3431     0.3597     0.3762     0.3927
            0.4092     0.4258     0.4455     0.4650     0.4843
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            0.5034     0.5223     0.5411     0.5598     0.5783
            0.5967     0.6150     0.6332     0.6512     0.6687
            0.6862     0.7036     0.7210     0.7383     0.7556
            0.7728     0.7909     0.8176     0.8441     0.8705
            0.8967     0.9227     0.9486     0.9744     1.0000
Width:
            0.1288     0.1504     0.1719     0.1935     0.2151
            0.2367     0.2582     0.2798     0.3014     0.3229
            0.3445     0.3658     0.3871     0.4084     0.4297
            0.4510     0.4725     0.4952     0.5180     0.5407
            0.5635     0.5860     0.6038     0.6216     0.6393
            0.6571     0.6748     0.6926     0.7103     0.7281
            0.7458     0.7636     0.7813     0.7992     0.8176
            0.8361     0.8545     0.8729     0.8913     0.9098
            0.9282     0.9456     0.9524     0.9592     0.9660
            0.9728     0.9796     0.9864     0.9932     1.0000

Transect Ditch5
Area:
            0.0007     0.0027     0.0060     0.0106     0.0163
            0.0229     0.0301     0.0381     0.0466     0.0559
            0.0659     0.0765     0.0878     0.0997     0.1124
            0.1257     0.1397     0.1544     0.1697     0.1857
            0.2024     0.2197     0.2376     0.2562     0.2755
            0.2954     0.3159     0.3371     0.3590     0.3815
            0.4047     0.4285     0.4531     0.4785     0.5048
            0.5319     0.5599     0.5888     0.6185     0.6492
            0.6806     0.7129     0.7461     0.7802     0.8151
            0.8509     0.8873     0.9242     0.9618     1.0000
Hrad:
            0.0195     0.0390     0.0592     0.0796     0.1021
            0.1289     0.1543     0.1787     0.2023     0.2252
            0.2476     0.2696     0.2913     0.3127     0.3338
            0.3548     0.3756     0.3962     0.4171     0.4381
            0.4588     0.4794     0.4999     0.5204     0.5407
            0.5609     0.5811     0.6012     0.6212     0.6412
            0.6611     0.6810     0.6956     0.7103     0.7252
            0.7405     0.7559     0.7716     0.7875     0.8036
            0.8199     0.8363     0.8528     0.8693     0.8859
            0.9067     0.9302     0.9536     0.9769     1.0000
Width:
            0.0348     0.0695     0.1028     0.1344     0.1618
            0.1794     0.1969     0.2145     0.2321     0.2496
            0.2672     0.2847     0.3023     0.3198     0.3374
            0.3549     0.3725     0.3901     0.4071     0.4240
            0.4410     0.4579     0.4749     0.4918     0.5087
            0.5257     0.5426     0.5596     0.5765     0.5935
            0.6104     0.6274     0.6495     0.6719     0.6943
            0.7167     0.7391     0.7616     0.7840     0.8064
            0.8288     0.8512     0.8737     0.8963     0.9190
            0.9375     0.9531     0.9687     0.9844     1.0000

Transect Ditch6
Area:
            0.0027     0.0089     0.0159     0.0235     0.0319
            0.0409     0.0507     0.0612     0.0724     0.0843
            0.0970     0.1103     0.1243     0.1391     0.1546
            0.1707     0.1873     0.2044     0.2220     0.2401
            0.2587     0.2777     0.2973     0.3173     0.3378
            0.3588     0.3802     0.4022     0.4246     0.4476
            0.4710     0.4949     0.5194     0.5442     0.5693
            0.5946     0.6203     0.6464     0.6731     0.7002
            0.7278     0.7558     0.7843     0.8133     0.8428
            0.8727     0.9033     0.9347     0.9670     1.0000
```

Hrad:

0.0161	0.0463	0.0740	0.0997	0.1239
0.1470	0.1691	0.1906	0.2114	0.2317
0.2517	0.2713	0.2906	0.3097	0.3285
0.3505	0.3732	0.3956	0.4177	0.4394
0.4608	0.4820	0.5030	0.5237	0.5442
0.5645	0.5846	0.6046	0.6244	0.6441
0.6636	0.6830	0.7014	0.7275	0.7534
0.7775	0.7967	0.8158	0.8348	0.8537
0.8726	0.8914	0.9101	0.9288	0.9474
0.9639	0.9723	0.9811	0.9904	1.0000

Width:

0.1730	0.1966	0.2179	0.2392	0.2605
0.2818	0.3031	0.3244	0.3457	0.3670
0.3883	0.4096	0.4309	0.4522	0.4735
0.4898	0.5043	0.5188	0.5333	0.5478
0.5624	0.5769	0.5914	0.6059	0.6204
0.6349	0.6494	0.6639	0.6785	0.6930
0.7075	0.7220	0.7380	0.7453	0.7527
0.7617	0.7757	0.7897	0.8037	0.8177
0.8317	0.8457	0.8597	0.8737	0.8877
0.9037	0.9278	0.9519	0.9759	1.0000

Transect Ditch7

Area:

0.0009	0.0049	0.0096	0.0151	0.0213
0.0283	0.0359	0.0443	0.0534	0.0632
0.0737	0.0850	0.0969	0.1096	0.1230
0.1371	0.1520	0.1675	0.1838	0.2008
0.2186	0.2370	0.2562	0.2761	0.2967
0.3180	0.3401	0.3629	0.3864	0.4106
0.4356	0.4612	0.4876	0.5147	0.5425
0.5706	0.5991	0.6279	0.6570	0.6865
0.7163	0.7465	0.7770	0.8078	0.8389
0.8704	0.9023	0.9344	0.9669	1.0000

Hrad:

0.0174	0.0403	0.0685	0.0941	0.1179
0.1405	0.1623	0.1834	0.2040	0.2242
0.2440	0.2636	0.2830	0.3023	0.3213
0.3402	0.3590	0.3777	0.3963	0.4148
0.4333	0.4517	0.4701	0.4885	0.5068
0.5251	0.5433	0.5615	0.5797	0.5979
0.6160	0.6345	0.6535	0.6724	0.6906
0.7152	0.7396	0.7636	0.7873	0.8108
0.8339	0.8568	0.8794	0.9018	0.9239
0.9459	0.9676	0.9891	1.0104	1.0000

Width:

0.0725	0.1294	0.1505	0.1715	0.1925
0.2136	0.2346	0.2557	0.2767	0.2978
0.3188	0.3399	0.3609	0.3820	0.4030
0.4241	0.4453	0.4665	0.4876	0.5088
0.5299	0.5511	0.5722	0.5934	0.6145
0.6357	0.6568	0.6780	0.6991	0.7203
0.7414	0.7622	0.7821	0.8066	0.8194
0.8292	0.8390	0.8488	0.8586	0.8684
0.8782	0.8880	0.8978	0.9076	0.9174
0.9272	0.9370	0.9468	0.9566	1.0000

Transect Ditch8

Area:

0.0023	0.0092	0.0192	0.0298	0.0409
0.0525	0.0644	0.0768	0.0896	0.1029
0.1167	0.1310	0.1458	0.1610	0.1768
0.1930	0.2097	0.2270	0.2446	0.2628

```
            0.2815     0.3007     0.3203     0.3405     0.3611
            0.3821     0.4035     0.4253     0.4474     0.4699
            0.4928     0.5161     0.5397     0.5638     0.5882
            0.6130     0.6382     0.6638     0.6897     0.7161
            0.7428     0.7699     0.7974     0.8253     0.8536
            0.8822     0.9112     0.9405     0.9700     1.0000
Hrad:
            0.0160     0.0324     0.0596     0.0874     0.1138
            0.1406     0.1664     0.1915     0.2146     0.2370
            0.2588     0.2801     0.3009     0.3213     0.3414
            0.3611     0.3805     0.3996     0.4184     0.4370
            0.4554     0.4737     0.4917     0.5095     0.5272
            0.5492     0.5707     0.5911     0.6114     0.6315
            0.6514     0.6712     0.6908     0.7104     0.7298
            0.7491     0.7682     0.7873     0.8062     0.8251
            0.8439     0.8625     0.8811     0.8996     0.9181
            0.9366     0.9575     0.9783     0.9989     1.0000
Width:
            0.1514     0.2983     0.3357     0.3537     0.3718
            0.3847     0.3977     0.4107     0.4264     0.4423
            0.4582     0.4742     0.4901     0.5061     0.5220
            0.5379     0.5539     0.5698     0.5858     0.6017
            0.6177     0.6336     0.6495     0.6655     0.6814
            0.6923     0.7036     0.7161     0.7286     0.7411
            0.7536     0.7662     0.7787     0.7912     0.8037
            0.8163     0.8288     0.8413     0.8538     0.8663
            0.8789     0.8914     0.9039     0.9164     0.9290
            0.9413     0.9509     0.9605     0.9701     1.0000

Transect Ditch9
Area:
            0.0017     0.0045     0.0080     0.0123     0.0173
            0.0231     0.0296     0.0368     0.0448     0.0535
            0.0630     0.0732     0.0841     0.0958     0.1082
            0.1214     0.1353     0.1500     0.1654     0.1815
            0.1984     0.2160     0.2344     0.2536     0.2735
            0.2942     0.3156     0.3378     0.3607     0.3844
            0.4089     0.4341     0.4602     0.4870     0.5149
            0.5434     0.5723     0.6017     0.6316     0.6620
            0.6928     0.7241     0.7559     0.7881     0.8208
            0.8540     0.8877     0.9218     0.9587     1.0000
Hrad:
            0.0322     0.0651     0.0937     0.1202     0.1454
            0.1697     0.1936     0.2171     0.2403     0.2633
            0.2862     0.3089     0.3316     0.3541     0.3766
            0.3991     0.4215     0.4438     0.4660     0.4881
            0.5101     0.5321     0.5542     0.5762     0.5983
            0.6202     0.6420     0.6638     0.6857     0.7075
            0.7294     0.7509     0.7721     0.7934     0.8088
            0.8401     0.8712     0.9020     0.9326     0.9627
            0.9925     1.0221     1.0515     1.0807     1.1098
            1.1386     1.1673     1.1829     1.1056     1.0000
Width:
            0.0535     0.0698     0.0862     0.1025     0.1188
            0.1352     0.1515     0.1678     0.1842     0.2005
            0.2169     0.2332     0.2495     0.2659     0.2822
            0.2986     0.3149     0.3312     0.3477     0.3643
            0.3809     0.3975     0.4141     0.4307     0.4473
            0.4640     0.4808     0.4976     0.5144     0.5313
            0.5481     0.5653     0.5827     0.6002     0.6234
            0.6336     0.6438     0.6540     0.6641     0.6745
            0.6849     0.6953     0.7057     0.7162     0.7266
            0.7370     0.7474     0.7668     0.8596     1.0000
```

```
*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 11/23/2020 00:00:00
Ending Date .............. 11/24/2020 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:00:05
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 5.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         0.823        55.690
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.393        26.564
Surface Runoff ...........         0.403        27.263
Final Storage ............         0.028         1.906
Continuity Error (%) .....        -0.079


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.403         4.029
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         0.403         4.028
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.002
Continuity Error (%) .....         0.003


************************
```

Highest Continuity Errors
****
Node J25 (1.13%)

****
Time-Step Critical Elements
****
Link C40 (67.08%)

****
Highest Flow Instability Indexes
****
Link C31 (18)
Link C54 (15)
Link C55 (14)
Link C61 (12)
Link C56 (12)

****
Routing Time Step Summary
****
Minimum Time Step : 0.71 sec
Average Time Step : 2.82 sec
Maximum Time Step : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00
Time Step Frequencies :
5.000 - 3.155 sec : 41.46 %
3.155 - 1.991 sec : 10.54 %
1.991 - 1.256 sec : 18.44 %
1.256 - 0.792 sec : 22.45 %
0.792 - 0.500 sec : 7.11 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Tota Runo 10^6 l
D1	55.69	0.00	0.00	36.16	0.54	15.32	15.86	0.0
D10	55.69	0.00	0.00	36.16	0.54	16.68	17.22	0.0
D11	55.69	0.00	0.00	36.13	0.54	17.76	18.31	0.0
D12	55.69	0.00	0.00	36.16	0.54	15.26	15.80	0.1
D13	55.69	0.00	0.00	36.16	0.54	17.33	17.88	0.0
D15	55.69	0.00	0.00	36.08	0.54	17.83	18.37	0.0
D16	55.69	0.00	0.00	36.16	0.54	16.95	17.50	0.0
D17	55.69	0.00	0.00	35.50	0.54	18.41	18.95	0.0
D2	55.69	0.00	0.00	34.92	0.54	19.02	19.56	0.0
D2_1	55.69	0.00	0.00	35.83	0.54	18.08	18.62	0.0
D20	55.69	0.00	0.00	36.16	0.54	17.03	17.58	0.0
D21	55.69	0.00	0.00	35.80	0.54	18.11	18.65	0.0
D22	55.69	0.00	0.00	36.16	0.54	17.63	18.17	0.0
D23	55.69	0.00	0.00	36.16	0.54	16.91	17.45	0.0
D24	55.69	0.00	0.00	36.16	0.54	16.98	17.52	0.0
D25	55.69	0.00	0.00	36.16	0.54	17.34	17.88	0.0
D27	55.69	0.00	0.00	34.53	0.54	19.40	19.94	0.0

D28	55.69	0.00	0.00	34.37	0.54	19.59	20.13	0.0
D29	55.69	0.00	0.00	35.36	0.54	18.57	19.11	0.0
D3	55.69	0.00	0.00	36.08	0.54	17.83	18.37	0.0
D4	55.69	0.00	0.00	35.69	0.54	18.22	18.77	0.0
D40	55.69	0.00	0.00	34.64	0.54	19.28	19.83	0.0
D41	55.69	0.00	0.00	34.51	0.54	19.45	20.00	0.0
D5	55.69	0.00	0.00	36.16	0.54	17.22	17.77	0.0
D6	55.69	0.00	0.00	36.10	0.54	17.79	18.33	0.0
D7	55.69	0.00	0.00	36.16	0.54	17.45	17.99	0.0
D8	55.69	0.00	0.00	36.16	0.54	17.57	18.11	0.0
D9	55.69	0.00	0.00	36.16	0.54	16.55	17.09	0.0
EXT1	55.69	0.00	0.00	33.76	3.80	16.88	20.68	0.2
EXT10	55.69	0.00	0.00	32.96	3.80	17.70	21.51	0.1
EXT2	55.69	0.00	0.00	33.84	3.80	16.81	20.61	0.1
EXT3	55.69	0.00	0.00	33.97	3.80	16.05	19.85	0.0
EXT4	55.69	0.00	0.00	32.67	3.80	17.98	21.78	0.0
EXT5	55.69	0.00	0.00	33.97	3.80	14.60	18.40	0.0
EXT6	55.69	0.00	0.00	33.97	3.80	16.44	20.24	0.0
EXT7	55.69	0.00	0.00	33.97	3.80	13.65	17.46	0.1
EXT8	55.69	0.00	0.00	33.97	3.80	15.16	18.96	0.1
EXT9	55.69	0.00	0.00	33.73	3.80	16.91	20.71	0.5
G	55.69	0.00	0.00	36.16	0.54	17.44	17.98	0.0
G1	55.69	0.00	0.00	36.16	0.54	17.36	17.90	0.0
G10	55.69	0.00	0.00	34.48	0.54	19.49	20.03	0.0
G2	55.69	0.00	0.00	36.16	0.54	17.21	17.76	0.0
G3	55.69	0.00	0.00	36.16	0.54	16.27	16.82	0.0
G4	55.69	0.00	0.00	34.97	0.54	18.94	19.49	0.0
G5	55.69	0.00	0.00	35.33	0.54	18.58	19.12	0.0
G6	55.69	0.00	0.00	36.16	0.54	17.08	17.62	0.0
G7	55.69	0.00	0.00	36.08	0.54	17.84	18.38	0.0
G8	55.69	0.00	0.00	35.94	0.54	17.98	18.52	0.0
P1	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R1	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R10	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
R12	55.69	0.00	0.00	0.87	51.63	1.75	53.38	0.0
R13_14	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
R15	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
R16	55.69	0.00	0.00	0.87	51.64	1.75	53.39	0.0
R17_1	55.69	0.00	0.00	0.87	51.63	1.75	53.38	0.0
R17_2	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
R18	55.69	0.00	0.00	13.07	13.58	24.96	38.54	0.0
R19	55.69	0.00	0.00	0.87	51.52	1.73	53.25	0.1
R2	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R20	55.69	0.00	0.00	0.87	51.54	1.73	53.28	0.0
R22	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R23_25	55.69	0.00	0.00	0.87	51.57	1.74	53.30	0.0
R24	55.69	0.00	0.00	0.87	51.56	1.74	53.30	0.0
R26	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
R26_2	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
R27	55.69	0.00	0.00	0.87	51.62	1.75	53.37	0.0
R28	55.69	0.00	0.00	0.87	51.62	1.75	53.37	0.0
R29	55.69	0.00	0.00	0.87	51.61	1.75	53.35	0.0
R3	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
R30	55.69	0.00	0.00	0.87	51.61	1.75	53.35	0.0
R31	55.69	0.00	0.00	0.87	51.60	1.74	53.34	0.0
R32	55.69	0.00	0.00	0.87	51.60	1.74	53.34	0.0
R33	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R34	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R35_2	55.69	0.00	0.00	0.87	51.63	1.75	53.38	0.0
R36	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
R37	55.69	0.00	0.00	0.87	51.59	1.74	53.33	0.0
R38	55.69	0.00	0.00	0.87	51.64	1.75	53.39	0.0
R39	55.69	0.00	0.00	1.74	48.88	3.47	52.35	0.0
R39_1	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0

R4	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
R40_2	55.69	0.00	0.00	1.74	48.90	3.48	52.38	0.0
R40_3	55.69	0.00	0.00	1.74	48.92	3.50	52.42	0.0
R40_4	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_1	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_2	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R41_4	55.69	0.00	0.00	1.74	48.89	3.48	52.36	0.0
R41_5	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R42_1	55.69	0.00	0.00	1.74	48.92	3.49	52.41	0.0
R42_3	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R42_4	55.69	0.00	0.00	1.74	48.89	3.48	52.37	0.0
R6	55.69	0.00	0.00	0.87	51.64	1.75	53.39	0.0
R7	55.69	0.00	0.00	0.87	51.64	1.75	53.39	0.0
R8	55.69	0.00	0.00	0.87	51.63	1.75	53.37	0.0
R9	55.69	0.00	0.00	0.87	51.58	1.74	53.33	0.0
S1	55.69	0.00	0.00	35.47	0.54	18.44	18.99	0.0
S3	55.69	0.00	0.00	1.38	51.57	1.33	52.90	0.0
S4	55.69	0.00	0.00	35.74	0.54	18.16	18.70	0.0
SW1_1	55.69	0.00	0.00	0.87	51.64	1.75	53.39	0.0
SW10	55.69	0.00	0.00	0.87	51.59	1.74	53.34	0.0
SW12	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
SW13	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
SW17	55.69	0.00	0.00	0.87	51.59	1.74	53.34	0.0
SW2	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
SW20	55.69	0.00	0.00	0.87	51.61	1.75	53.36	0.0
SW21	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
SW3	55.69	0.00	0.00	0.87	51.60	1.74	53.34	0.0
SW5	55.69	0.00	0.00	0.87	51.58	1.74	53.32	0.0
SW6	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0
SW7	55.69	0.00	0.00	0.87	51.55	1.73	53.28	0.0
SW8	55.69	0.00	0.00	0.87	51.56	1.74	53.30	0.0
SW9	55.69	0.00	0.00	0.87	51.57	1.74	53.31	0.0

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Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
DICB1	JUNCTION	0.01	0.04	259.46	0 02:31	0.04
J1	JUNCTION	0.08	0.21	260.42	0 02:30	0.21
J10	JUNCTION	0.01	0.06	262.86	0 02:29	0.06
J11	JUNCTION	0.02	0.07	262.35	0 02:30	0.07
J12	JUNCTION	0.01	0.02	257.14	0 02:32	0.02
J13	JUNCTION	0.00	0.02	250.01	0 02:30	0.02
J14	JUNCTION	0.04	0.16	231.75	0 02:32	0.16
J15	JUNCTION	0.02	0.07	264.16	0 02:30	0.07
J17	JUNCTION	0.00	0.02	263.24	0 02:30	0.02
J18	JUNCTION	0.03	0.10	261.66	0 02:30	0.10
J19	JUNCTION	0.03	0.08	262.15	0 02:29	0.08
J2	JUNCTION	0.01	0.02	262.70	0 02:30	0.02
J20	JUNCTION	0.01	0.03	262.00	0 02:30	0.03
J21	JUNCTION	0.01	0.06	264.12	0 02:30	0.06
J22	JUNCTION	0.02	0.07	262.59	0 02:30	0.07
J23	JUNCTION	0.07	0.21	260.76	0 02:33	0.21
J24	JUNCTION	0.00	0.02	264.62	0 02:30	0.02
J25	JUNCTION	0.09	0.13	249.75	0 02:31	0.13
J26	JUNCTION	0.00	0.02	262.68	0 02:30	0.02
J27	JUNCTION	0.04	0.13	257.79	0 02:31	0.13
J28	JUNCTION	0.00	0.02	244.26	0 02:30	0.02

J29	JUNCTION	0.02	0.08	231.13	0	02:31	0.08
J3	JUNCTION	0.04	0.10	261.73	0	02:31	0.10
J30	JUNCTION	0.03	0.08	262.82	0	02:30	0.08
J31	JUNCTION	0.01	0.05	262.30	0	02:30	0.05
J32	JUNCTION	0.07	0.25	257.70	0	02:32	0.25
J33	JUNCTION	0.08	0.23	231.38	0	02:33	0.23
J34	JUNCTION	0.02	0.07	261.97	0	02:30	0.07
J35	JUNCTION	0.02	0.06	262.03	0	02:30	0.06
J36	JUNCTION	0.09	0.24	232.32	0	02:29	0.24
J37	JUNCTION	0.01	0.07	231.07	0	02:30	0.07
J38	JUNCTION	0.00	0.01	230.94	0	02:30	0.01
J39	JUNCTION	0.01	0.05	230.24	0	02:30	0.05
J4	JUNCTION	0.01	0.05	260.99	0	02:30	0.05
J40	JUNCTION	0.00	0.02	229.43	0	02:30	0.02
J41	JUNCTION	0.01	0.03	262.03	0	02:30	0.03
J42	JUNCTION	0.01	0.05	261.79	0	02:30	0.05
J43	JUNCTION	0.04	0.10	257.46	0	02:31	0.10
J44	JUNCTION	0.01	0.03	262.03	0	02:30	0.03
J45	JUNCTION	0.01	0.04	261.86	0	02:12	0.04
J46	JUNCTION	0.01	0.03	262.16	0	02:30	0.03
J47	JUNCTION	0.02	0.06	260.56	0	02:33	0.06
J48	JUNCTION	0.03	0.08	261.81	0	02:33	0.08
J49	JUNCTION	0.08	0.27	241.33	0	02:30	0.27
J5	JUNCTION	0.00	0.01	264.16	0	02:30	0.01
J50	JUNCTION	0.01	0.03	260.79	0	02:30	0.03
J51	JUNCTION	0.02	0.05	239.78	0	02:30	0.05
J54	JUNCTION	0.08	0.25	237.05	0	02:29	0.25
J55	JUNCTION	0.02	0.06	235.81	0	02:30	0.06
J56	JUNCTION	0.08	0.27	234.40	0	02:31	0.27
J57	JUNCTION	0.02	0.06	233.27	0	02:32	0.06
J58	JUNCTION	0.02	0.07	231.81	0	02:32	0.07
J59	JUNCTION	0.01	0.04	230.69	0	02:30	0.04
J6	JUNCTION	0.06	0.13	260.96	0	02:31	0.13
J60	JUNCTION	0.04	0.11	250.27	0	02:31	0.11
J61	JUNCTION	0.01	0.04	261.54	0	02:30	0.04
J62	JUNCTION	0.05	0.20	228.65	0	02:31	0.20
J63	JUNCTION	0.01	0.03	227.50	0	02:31	0.03
J7	JUNCTION	0.03	0.07	263.52	0	02:32	0.07
J8	JUNCTION	0.01	0.03	263.40	0	02:30	0.03
J82	JUNCTION	0.01	0.04	261.24	0	02:30	0.04
J9	JUNCTION	0.03	0.09	263.04	0	02:30	0.09
STM-MH-EX	JUNCTION	0.05	0.18	258.60	0	02:30	0.18
J16	OUTFALL	0.01	0.04	263.17	0	02:30	0.04
OF1	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF4	OUTFALL	0.01	0.03	225.03	0	02:30	0.03
Outlet1	OUTFALL	0.03	0.09	258.15	0	02:30	0.09
Outlet2_1	OUTFALL	0.01	0.05	256.98	0	02:30	0.05
Outlet2_2	OUTFALL	0.02	0.06	257.06	0	02:30	0.06
Outlet2_3	OUTFALL	0.05	0.18	257.49	0	02:33	0.18
Outlet2_4	OUTFALL	0.01	0.05	256.55	0	02:30	0.05
Outlet2_5	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet3	OUTFALL	0.00	0.00	260.20	0	00:00	0.00
Outlet4	OUTFALL	0.01	0.04	261.14	0	02:30	0.04
Outlet5_1	OUTFALL	0.01	0.03	249.73	0	02:31	0.03
Outlet5_2	OUTFALL	0.01	0.03	250.26	0	02:30	0.03
Outlet6-1	OUTFALL	0.02	0.08	226.70	0	02:31	0.08
Outlet6-2	OUTFALL	0.00	0.02	226.88	0	02:30	0.02

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
DICB1	JUNCTION	0.000	0.018	0	02:31	0	0.0847	0.009
J1	JUNCTION	0.036	0.097	0	02:30	0.303	0.695	0.071
J10	JUNCTION	0.027	0.040	0	02:31	0.107	0.17	-0.044
J11	JUNCTION	0.024	0.063	0	02:29	0.221	0.391	-0.054
J12	JUNCTION	0.000	0.017	0	02:31	0	0.0955	0.065
J13	JUNCTION	0.020	0.020	0	02:30	0.0733	0.0733	-0.297
J14	JUNCTION	0.030	0.050	0	02:30	0.153	0.226	0.005
J15	JUNCTION	0.026	0.026	0	02:30	0.101	0.101	-0.003
J17	JUNCTION	0.004	0.004	0	02:30	0.016	0.016	-0.198
J18	JUNCTION	0.010	0.018	0	02:29	0.0452	0.0847	0.110
J19	JUNCTION	0.004	0.008	0	02:30	0.0235	0.0396	0.210
J2	JUNCTION	0.006	0.006	0	02:30	0.0287	0.0287	-0.192
J20	JUNCTION	0.000	0.010	0	02:28	0	0.0395	-0.086
J21	JUNCTION	0.036	0.036	0	02:30	0.139	0.139	-0.034
J22	JUNCTION	0.032	0.067	0	02:30	0.163	0.302	-0.048
J23	JUNCTION	0.003	0.045	0	02:30	0.0265	0.311	0.238
J24	JUNCTION	0.007	0.007	0	02:30	0.0267	0.0267	-0.324
J25	JUNCTION	0.001	0.021	0	02:31	0.002	0.114	1.141
J26	JUNCTION	0.007	0.007	0	02:30	0.032	0.032	-0.528
J27	JUNCTION	0.002	0.068	0	02:30	0.0239	0.326	0.068
J28	JUNCTION	0.015	0.015	0	02:30	0.0576	0.0576	-0.152
J29	JUNCTION	0.013	0.102	0	02:32	0.0571	0.724	0.001
J3	JUNCTION	0.002	0.019	0	02:30	0.0268	0.091	0.254
J30	JUNCTION	0.002	0.008	0	02:30	0.018	0.0447	0.274
J31	JUNCTION	0.029	0.040	0	02:29	0.149	0.194	-0.004
J32	JUNCTION	0.000	0.066	0	02:31	0	0.326	0.122
J33	JUNCTION	0.001	0.075	0	02:32	0.00956	0.609	0.017
J34	JUNCTION	0.051	0.051	0	02:30	0.329	0.329	0.049
J35	JUNCTION	0.029	0.029	0	02:30	0.188	0.188	-0.063
J36	JUNCTION	0.000	0.074	0	02:32	0	0.599	0.048
J37	JUNCTION	0.004	0.004	0	02:30	0.0157	0.0157	-0.006
J38	JUNCTION	0.000	0.004	0	02:30	0	0.0157	0.001
J39	JUNCTION	0.001	0.005	0	02:30	0.00201	0.0177	0.022
J4	JUNCTION	0.027	0.033	0	02:30	0.11	0.152	-0.002
J40	JUNCTION	0.007	0.012	0	02:30	0.0262	0.0439	-0.033
J41	JUNCTION	0.006	0.006	0	02:30	0.0213	0.0213	-0.292
J42	JUNCTION	0.011	0.011	0	02:30	0.0427	0.0427	-0.221
J43	JUNCTION	0.003	0.018	0	02:30	0.0368	0.0956	0.108
J44	JUNCTION	0.016	0.016	0	02:30	0.0586	0.0586	-0.196
J45	JUNCTION	0.011	0.011	0	02:30	0.0427	0.0427	-0.055
J46	JUNCTION	0.010	0.010	0	02:30	0.0373	0.0373	-0.055
J47	JUNCTION	0.000	0.048	0	02:33	0	0.31	-0.066
J48	JUNCTION	0.001	0.007	0	02:30	0.0129	0.0416	0.197
J49	JUNCTION	0.081	0.081	0	02:30	0.599	0.599	-0.055
J5	JUNCTION	0.003	0.003	0	02:30	0.0107	0.0107	-0.223
J50	JUNCTION	0.018	0.018	0	02:30	0.0693	0.0693	-0.001
J51	JUNCTION	0.000	0.086	0	02:29	0	0.6	0.051
J54	JUNCTION	0.000	0.080	0	02:30	0	0.599	0.047
J55	JUNCTION	0.000	0.080	0	02:29	0	0.599	-0.047
J56	JUNCTION	0.000	0.080	0	02:30	0	0.599	0.042
J57	JUNCTION	0.000	0.074	0	02:31	0	0.599	-0.042
J58	JUNCTION	0.000	0.074	0	02:29	0	0.599	-0.046
J59	JUNCTION	0.010	0.052	0	02:30	0.0367	0.263	0.089
J6	JUNCTION	0.008	0.037	0	02:30	0.0633	0.252	0.005
J60	JUNCTION	0.004	0.021	0	02:30	0.016	0.111	-0.116
J61	JUNCTION	0.002	0.041	0	02:30	0.0218	0.193	0.024
J62	JUNCTION	0.000	0.052	0	02:30	0	0.263	-0.106

J63	JUNCTION	0.000	0.052	0	02:31	0	0.263	-0.143
J7	JUNCTION	0.001	0.004	0	02:30	0.00917	0.0199	0.467
J8	JUNCTION	0.006	0.009	0	02:30	0.0213	0.0411	-0.040
J82	JUNCTION	0.000	0.018	0	02:30	0	0.0846	-0.119
J9	JUNCTION	0.004	0.013	0	02:30	0.0219	0.0631	0.160
STM-MH-EX	JUNCTION	0.000	0.138	0	02:30	0	0.779	-0.028
J16	OUTFALL	0.001	0.027	0	02:30	0.0142	0.116	0.000
OF1	OUTFALL	0.003	0.003	0	02:30	0.0107	0.0107	0.000
OF2	OUTFALL	0.003	0.003	0	02:30	0.0107	0.0107	0.000
OF3	OUTFALL	0.011	0.011	0	02:30	0.0419	0.0419	0.000
OF4	OUTFALL	0.000	0.051	0	02:30	0	0.263	0.000
Outlet1	OUTFALL	0.000	0.113	0	02:30	0	0.779	0.000
Outlet2_1	OUTFALL	0.004	0.039	0	02:30	0.0482	0.242	0.000
Outlet2_2	OUTFALL	0.006	0.052	0	02:30	0.101	0.43	0.000
Outlet2_3	OUTFALL	0.000	0.071	0	02:33	0	0.326	0.000
Outlet2_4	OUTFALL	0.002	0.033	0	02:30	0.0197	0.171	0.000
Outlet2_5	OUTFALL	0.009	0.009	0	02:30	0.053	0.053	0.000
Outlet3	OUTFALL	0.007	0.047	0	02:33	0.0253	0.335	0.000
Outlet4	OUTFALL	0.000	0.040	0	02:30	0	0.193	0.000
Outlet5_1	OUTFALL	0.001	0.022	0	02:31	0.00595	0.118	0.000
Outlet5_2	OUTFALL	0.003	0.021	0	02:30	0.0376	0.107	0.000
Outlet6-1	OUTFALL	0.014	0.106	0	02:31	0.0602	0.784	0.000
Outlet6-2	OUTFALL	0.001	0.013	0	02:30	0.00399	0.0479	0.000

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Node Surcharge Summary
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No nodes were surcharged.

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J16	70.06	0.006	0.027	0.116
OF1	47.89	0.001	0.003	0.011
OF2	47.74	0.001	0.003	0.011
OF3	52.29	0.003	0.011	0.042
OF4	71.37	0.012	0.051	0.263
Outlet1	87.56	0.026	0.113	0.779
Outlet2_1	82.46	0.009	0.039	0.242
Outlet2_2	93.58	0.012	0.052	0.430
Outlet2_3	82.93	0.013	0.071	0.326
Outlet2_4	73.03	0.008	0.033	0.171
Outlet2_5	65.70	0.003	0.009	0.053
Outlet3	89.70	0.011	0.047	0.335
Outlet4	75.33	0.008	0.040	0.193
Outlet5_1	78.08	0.005	0.022	0.118
Outlet5_2	70.55	0.005	0.021	0.107
Outlet6-1	75.28	0.032	0.106	0.784

Outlet6-2	54.66	0.003	0.013	0.048
System	71.66	0.157	0.654	4.028

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.018	0	02:30	1.12	0.05	0.16
C10	CONDUIT	0.043	0	02:32	1.72	0.05	0.22
C11	CONDUIT	0.039	0	02:29	0.51	0.01	0.09
C12	CONDUIT	0.061	0	02:30	0.30	0.01	0.20
C13	CONDUIT	0.021	0	02:31	0.21	0.00	0.09
C14	CONDUIT	0.015	0	02:30	0.35	0.01	0.16
C15	CONDUIT	0.026	0	02:30	0.42	0.02	0.11
C16	CONDUIT	0.004	0	02:30	0.08	0.00	0.05
C17	CONDUIT	0.010	0	02:28	0.90	0.04	0.12
C18	CONDUIT	0.008	0	02:30	0.10	0.00	0.07
C19	CONDUIT	0.035	0	02:30	0.48	0.02	0.13
C2	CONDUIT	0.048	0	02:33	1.35	0.41	0.36
C20	CONDUIT	0.066	0	02:30	0.52	0.02	0.20
C21	CONDUIT	0.007	0	02:30	0.15	0.01	0.17
C22	CONDUIT	0.094	0	02:31	1.02	0.01	0.08
C23	CONDUIT	0.032	0	02:30	0.61	0.01	0.09
C24	CONDUIT	0.066	0	02:31	0.37	0.06	0.38
C25	CONDUIT	0.071	0	02:33	0.96	0.33	0.48
C26	CONDUIT	0.011	0	02:29	0.77	0.03	0.14
C27	CONDUIT	0.036	0	02:30	0.65	0.01	0.07
C28	CONDUIT	0.048	0	02:30	0.62	0.01	0.09
C29	CONDUIT	0.029	0	02:30	0.23	0.02	0.19
C3	CONDUIT	0.015	0	02:31	0.92	0.08	0.17
C30	CONDUIT	0.007	0	02:30	0.07	0.00	0.23
C31	CONDUIT	0.086	0	02:29	1.80	0.09	0.35
C32	CONDUIT	0.011	0	02:30	0.13	0.01	0.15
C33	CONDUIT	0.006	0	02:30	0.07	0.00	0.13
C34	CONDUIT	0.015	0	02:30	0.21	0.00	0.07
C35	CONDUIT	0.010	0	02:30	0.25	0.01	0.07
C36	CONDUIT	0.011	0	02:30	0.28	0.01	0.08
C37	CHANNEL	0.018	0	02:31	0.71	0.01	0.10
C4	CONDUIT	0.006	0	02:30	0.13	0.00	0.10
C40	CONDUIT	0.040	0	02:30	1.66	0.01	0.08
C41	CONDUIT	0.017	0	02:31	1.44	0.06	0.13
C42	CONDUIT	0.043	0	02:33	1.07	0.02	0.13
C43	CONDUIT	0.004	0	02:30	0.60	0.02	0.09
C44	CONDUIT	0.017	0	02:32	0.22	0.00	0.07
C45	CONDUIT	0.018	0	02:30	0.63	0.00	0.05
C48	CONDUIT	0.005	0	02:30	0.94	0.01	0.07
C49	CONDUIT	0.004	0	02:30	0.14	0.00	0.04
C5	CONDUIT	0.020	0	02:30	0.21	0.00	0.13
C50	CONDUIT	0.012	0	02:30	0.59	0.00	0.03
C51	CONDUIT	0.018	0	02:31	1.05	0.03	0.36
C52	CONDUIT	0.080	0	02:29	1.76	0.09	0.33
C53	CONDUIT	0.074	0	02:31	1.64	0.10	0.37
C54	CONDUIT	0.080	0	02:30	0.38	0.01	0.21
C55	CONDUIT	0.080	0	02:30	0.37	0.01	0.23
C56	CONDUIT	0.074	0	02:32	0.35	0.01	0.22
C57	CONDUIT	0.074	0	02:29	1.60	0.14	0.34
C58	CONDUIT	0.074	0	02:32	0.41	0.01	0.21

C59	CONDUIT	0.052	0	02:30	0.35	0.00	0.17
C60	CONDUIT	0.052	0	02:31	1.81	0.06	0.26
C61	CONDUIT	0.051	0	02:30	1.36	0.00	0.05
C7	CONDUIT	0.003	0	02:35	0.43	0.03	0.10
C8	CONDUIT	0.020	0	02:31	0.61	0.05	0.26
C9	CONDUIT	0.009	0	02:30	0.13	0.00	0.07
CW-1	CONDUIT	0.120	0	02:30	1.05	0.04	0.17
CW-2	CONDUIT	0.113	0	02:30	0.89	0.04	0.14
CW-3	CONDUIT	0.035	0	02:31	0.77	0.07	0.28
CW-4	CONDUIT	0.018	0	02:31	1.18	0.07	0.16
CW-5	CONDUIT	0.080	0	02:32	1.64	0.16	0.25
CW-6	CONDUIT	0.007	0	02:33	0.55	0.02	0.14
DI4	CONDUIT	0.003	0	02:30	0.08	0.00	0.06

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.00	0.77
C10	1.00	0.00	0.00	0.00	0.07	0.93	0.00	0.00	0.00	0.99
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
C12	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
C13	1.00	0.00	0.05	0.00	0.94	0.00	0.00	0.00	0.39	0.00
C14	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	0.98	0.00
C15	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.05	0.00
C16	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	1.00	0.00
C17	1.00	0.00	0.00	0.00	0.44	0.56	0.00	0.00	0.00	0.26
C18	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.97	0.00
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C2	1.00	0.00	0.00	0.00	0.16	0.84	0.00	0.00	0.00	0.60
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C21	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.93	0.00
C22	1.00	0.00	0.00	0.00	0.47	0.53	0.00	0.00	0.15	0.00
C23	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C24	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C25	1.00	0.02	0.00	0.00	0.86	0.13	0.00	0.00	0.00	0.47
C26	1.00	0.00	0.00	0.00	0.84	0.16	0.00	0.00	0.00	0.97
C27	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C3	1.00	0.00	0.00	0.00	0.77	0.23	0.00	0.00	0.00	0.29
C30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C31	1.00	0.00	0.00	0.00	0.28	0.72	0.00	0.00	0.00	1.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95	0.00
C35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.92	0.00
C36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.91	0.00
C37	1.00	0.01	0.00	0.00	0.01	0.98	0.00	0.00	0.01	0.00
C4	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.93	0.00
C40	1.00	0.02	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
C41	1.00	0.00	0.00	0.00	0.18	0.82	0.00	0.00	0.00	0.25
C42	1.00	0.03	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00
C43	1.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.68
C44	1.00	0.00	0.02	0.00	0.97	0.00	0.00	0.00	0.96	0.00
C45	1.00	0.00	0.00	0.00	0.69	0.31	0.00	0.00	0.25	0.00
C48	1.00	0.00	0.00	0.00	0.39	0.60	0.00	0.00	0.00	0.99
C49	1.00	0.00	0.26	0.00	0.73	0.00	0.00	0.00	0.99	0.00

C5	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.99	0.00
C50	1.00	0.27	0.00	0.00	0.26	0.46	0.00	0.00	0.12	0.00
C51	1.00	0.00	0.01	0.00	0.56	0.43	0.00	0.00	0.98	0.00
C52	1.00	0.00	0.00	0.00	0.22	0.78	0.00	0.00	0.00	0.99
C53	1.00	0.00	0.00	0.00	0.22	0.78	0.00	0.00	0.00	0.99
C54	1.00	0.00	0.09	0.00	0.91	0.00	0.00	0.00	0.99	0.00
C55	1.00	0.00	0.16	0.00	0.84	0.00	0.00	0.00	0.99	0.00
C56	1.00	0.01	0.13	0.00	0.86	0.00	0.00	0.00	0.98	0.00
C57	1.00	0.01	0.00	0.00	0.20	0.80	0.00	0.00	0.00	0.52
C58	1.00	0.04	0.11	0.00	0.84	0.00	0.00	0.00	0.94	0.00
C59	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	1.00	0.00
C60	1.00	0.00	0.00	0.00	0.06	0.94	0.00	0.00	0.00	0.99
C61	1.00	0.06	0.01	0.00	0.01	0.92	0.00	0.00	0.10	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.97
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
CW-1	1.00	0.00	0.00	0.00	0.81	0.19	0.00	0.00	0.00	0.28
CW-2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.84
CW-3	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.93
CW-4	1.00	0.01	0.00	0.00	0.31	0.68	0.00	0.00	0.00	0.35
CW-5	1.00	0.00	0.04	0.00	0.29	0.67	0.00	0.00	0.00	0.69
CW-6	1.00	0.00	0.01	0.00	0.68	0.31	0.00	0.00	0.00	0.70
DI4	1.00	0.00	0.12	0.00	0.88	0.00	0.00	0.00	0.94	0.00

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Conduit Surcharge Summary
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No conduits were surcharged.

Analysis begun on: Wed Sep 22 22:55:38 2021
Analysis ended on: Wed Sep 22 22:55:43 2021
Total elapsed time: 00:00:05

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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WARNING 03: negative offset ignored for Link C37
WARNING 03: negative offset ignored for Link CW-1
WARNING 02: maximum depth increased for Node J29
WARNING 02: maximum depth increased for Node J30

*************
Element Count
*************
Number of rain gages ...... 6
Number of subcatchments ... 113
Number of nodes ........... 80
Number of links ........... 63
Number of pollutants ...... 0
Number of land uses ....... 0


****************
Raingage Summary
****************
                                                  Data       Recording
Name                 Data Source                  Type       Interval
----------------------------------------------------------------------
100Year_12Hour_AES(Bloor,TRCA) 100Year_12Hour_AES(Bloor,TRCA) INTENSITY   15 min.
100Year_6Hour_AES(Bloor,TRCA) 100Year_6Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_12Hour_AES(Bloor,TRCA) 10Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_6Hour_AES(Bloor,TRCA) 10Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.
50Year_12Hour_AES(Bloor,TRCA) 50Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
50Year_6Hour_AES(Bloor,TRCA) 50Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.


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Subcatchment Summary
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Name                         Area     Width   %Imperv    %Slope Rain Gage            Outlet
------------------------------------------------------------------------------------------------
D1                           0.30     13.33      1.00    0.3500 100Year_6Hour_AES(Bloor,TRCA) J1
D10                          0.28      9.82      1.00    1.8000 100Year_6Hour_AES(Bloor,TRCA) Outlet2_1
D11                          0.11      9.56      1.00    1.0000 100Year_6Hour_AES(Bloor,TRCA) Outlet2_5
D12                          0.64     15.02      1.00    1.2000 100Year_6Hour_AES(Bloor,TRCA) Outlet2_2
D13                          0.11      5.79      1.00    1.6000 100Year_6Hour_AES(Bloor,TRCA) Outlet2_4
D15                          0.07      6.36      1.00    1.0000 100Year_6Hour_AES(Bloor,TRCA) J48
D16                          0.24     15.48      1.00    0.7000 100Year_6Hour_AES(Bloor,TRCA) J6
D17                          0.14     16.87      1.00    1.4000 100Year_6Hour_AES(Bloor,TRCA) J23
D2                           0.02      6.37      1.00    0.7700 100Year_6Hour_AES(Bloor,TRCA) J18
D2_1                         0.05      6.20      1.00    0.7700 100Year_6Hour_AES(Bloor,TRCA) J18
D20                          0.07      6.67      1.00    0.3500 100Year_6Hour_AES(Bloor,TRCA) J3
D21                          0.07      6.36      1.00    1.5000 100Year_6Hour_AES(Bloor,TRCA) J61
D22                          0.08      7.62      1.00    0.7000 100Year_6Hour_AES(Bloor,TRCA) J3
D23                          0.05      4.17      1.00    0.4000 100Year_6Hour_AES(Bloor,TRCA) J61
D24                          0.21      5.47      1.00    4.4200 100Year_6Hour_AES(Bloor,TRCA) J43
D25                          0.21      7.00      1.00    4.0000 100Year_6Hour_AES(Bloor,TRCA) Outlet5_2
D27                          0.02      4.44      1.00    6.0000 100Year_6Hour_AES(Bloor,TRCA) Outlet6-2
D28                          0.01      4.54      1.00    3.7000 100Year_6Hour_AES(Bloor,TRCA) J39
D29                          0.05      3.13      1.00    7.0000 100Year_6Hour_AES(Bloor,TRCA) J33
D3                           0.07      6.36      1.00    1.0000 100Year_6Hour_AES(Bloor,TRCA) J19
D4                           0.06     11.54      1.00    0.4000 100Year_6Hour_AES(Bloor,TRCA) J9
D40                          0.03      9.09      1.00    2.0000 100Year_6Hour_AES(Bloor,TRCA) Outlet5_1
D41                          0.01      4.35      1.00    2.0000 100Year_6Hour_AES(Bloor,TRCA) J25
D5                           0.08      5.00      1.00    1.0000 100Year_6Hour_AES(Bloor,TRCA) J16
D6                           0.05      6.25      1.00    0.5000 100Year_6Hour_AES(Bloor,TRCA) J7
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D7	0.10	6.25	1.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	J30
D8	0.09	5.63	1.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J22
D9	0.14	4.38	1.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J27
EXT1	1.08	83.08	7.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J1
EXT10	0.54	28.42	7.00	16.0000	100Year_6Hour_AES(Bloor,TRCA)	J14
EXT2	0.64	42.67	7.00	1.8000	100Year_6Hour_AES(Bloor,TRCA)	J11
EXT3	0.45	34.62	7.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J11
EXT4	0.10	18.18	7.00	3.0000	100Year_6Hour_AES(Bloor,TRCA)	J10
EXT5	0.24	10.91	7.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J31
EXT6	0.26	15.76	7.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	J34
EXT7	0.82	34.17	7.00	0.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
EXT8	0.60	46.15	7.00	0.2000	100Year_6Hour_AES(Bloor,TRCA)	J35
EXT9	2.59	92.50	7.00	7.3000	100Year_6Hour_AES(Bloor,TRCA)	J49
G	0.05	5.00	1.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J31
G1	0.03	2.03	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
G10	0.02	13.33	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet3
G2	0.03	1.86	1.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
G3	0.07	2.09	1.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J22
G4	0.02	4.44	1.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
G5	0.04	5.88	1.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
G6	0.05	2.63	1.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J4
G7	0.04	3.33	1.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J2
G8	0.03	3.61	1.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J26
P1	0.05	3.13	95.00	1.3400	100Year_6Hour_AES(Bloor,TRCA)	J21
R1	0.06	7.50	95.00	0.3000	100Year_6Hour_AES(Bloor,TRCA)	J1
R10	0.04	5.33	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
R12	0.02	10.99	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
R13_14	0.08	5.00	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
R15	0.07	4.38	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
R16	0.04	11.98	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J22
R17_1	0.03	4.69	95.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J22
R17_2	0.10	4.76	95.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J31
R18	0.13	4.56	25.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J22
R19	0.18	4.22	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
R2	0.05	6.25	95.00	0.3000	100Year_6Hour_AES(Bloor,TRCA)	J18
R20	0.13	4.35	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J4
R22	0.07	4.67	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J34
R23_25	0.07	4.66	95.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J35
R24	0.07	4.52	95.00	0.7000	100Year_6Hour_AES(Bloor,TRCA)	J35
R26	0.04	38.46	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J6
R26_2	0.02	19.23	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet3
R27	0.03	19.48	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J42
R28	0.02	14.29	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet3
R29	0.03	5.36	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J42
R3	0.09	6.82	95.00	0.6000	100Year_6Hour_AES(Bloor,TRCA)	J10
R30	0.02	3.57	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J45
R31	0.02	3.57	95.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J45
R32	0.02	3.57	95.00	0.3500	100Year_6Hour_AES(Bloor,TRCA)	J42
R33	0.04	4.00	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J46
R34	0.04	4.00	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J41
R35_2	0.02	6.87	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	OF1
R36	0.11	4.07	95.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J44
R37	0.13	5.66	95.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J50
R38	0.03	6.00	95.00	3.5000	100Year_6Hour_AES(Bloor,TRCA)	J60
R39	0.14	5.00	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J13
R39_1	0.04	5.97	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J59
R4	0.07	5.30	95.00	0.6000	100Year_6Hour_AES(Bloor,TRCA)	J10
R40_2	0.09	5.08	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
R40_3	0.03	4.48	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J59
R40_4	0.07	6.36	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J14
R41_1	0.04	5.33	90.00	3.8000	100Year_6Hour_AES(Bloor,TRCA)	OF3
R41_2	0.03	5.00	90.00	2.0000	100Year_6Hour_AES(Bloor,TRCA)	J37
R41_4	0.12	5.46	90.00	5.7000	100Year_6Hour_AES(Bloor,TRCA)	J49
R41_5	0.05	5.00	90.00	6.0000	100Year_6Hour_AES(Bloor,TRCA)	J40

R42_1	0.04	5.33	90.00	3.8000	100Year_6Hour_AES(Bloor,TRCA)	OF3
R42_3	0.08	5.00	90.00	3.2500	100Year_6Hour_AES(Bloor,TRCA)	J29
R42_4	0.11	5.00	90.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J28
R6	0.02	7.55	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J9
R7	0.02	6.90	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	OF2
R8	0.04	6.67	95.00	1.3000	100Year_6Hour_AES(Bloor,TRCA)	J8
R9	0.08	5.93	95.00	1.1000	100Year_6Hour_AES(Bloor,TRCA)	J15
S1	0.08	4.44	1.00	7.0000	100Year_6Hour_AES(Bloor,TRCA)	J29
S3	0.05	3.13	95.00	0.9000	100Year_6Hour_AES(Bloor,TRCA)	J26
S4	0.07	4.67	1.00	3.0000	100Year_6Hour_AES(Bloor,TRCA)	Outlet6-1
SW1_1	0.01	3.26	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J18
SW10	0.04	3.33	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J2
SW12	0.04	3.64	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J45
SW13	0.03	2.50	95.00	0.5000	100Year_6Hour_AES(Bloor,TRCA)	J46
SW17	0.04	3.33	95.00	1.2800	100Year_6Hour_AES(Bloor,TRCA)	Outlet2_5
SW2	0.02	2.63	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J19
SW20	0.02	2.50	95.00	1.1500	100Year_6Hour_AES(Bloor,TRCA)	J5
SW21	0.05	3.13	95.00	1.5000	100Year_6Hour_AES(Bloor,TRCA)	J24
SW3	0.03	3.11	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J17
SW5	0.04	2.71	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J15
SW6	0.05	3.09	95.00	1.0000	100Year_6Hour_AES(Bloor,TRCA)	J21
SW7	0.09	2.69	95.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J22
SW8	0.08	3.16	95.00	1.7000	100Year_6Hour_AES(Bloor,TRCA)	J31
SW9	0.06	3.16	95.00	1.2000	100Year_6Hour_AES(Bloor,TRCA)	J4

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
DICB1	JUNCTION	259.42	1.50	0.0	
J1	JUNCTION	260.21	1.50	0.0	
J10	JUNCTION	262.80	0.70	0.0	
J11	JUNCTION	262.28	0.70	0.0	
J12	JUNCTION	257.12	0.90	0.0	
J13	JUNCTION	249.99	0.70	0.0	
J14	JUNCTION	231.59	0.70	0.0	
J15	JUNCTION	264.09	0.50	0.0	
J17	JUNCTION	263.22	0.90	0.0	
J18	JUNCTION	261.56	0.90	0.0	
J19	JUNCTION	262.06	0.90	0.0	
J2	JUNCTION	262.68	0.50	0.0	
J20	JUNCTION	261.97	0.90	0.0	
J21	JUNCTION	264.06	0.50	0.0	
J22	JUNCTION	262.52	0.50	0.0	
J23	JUNCTION	260.55	0.90	0.0	
J24	JUNCTION	264.60	0.90	0.0	
J25	JUNCTION	249.62	0.90	0.0	
J26	JUNCTION	262.66	0.50	0.0	
J27	JUNCTION	257.66	0.50	0.0	
J28	JUNCTION	244.24	0.30	0.0	
J29	JUNCTION	231.05	0.90	0.0	
J3	JUNCTION	261.63	0.60	0.0	
J30	JUNCTION	262.74	0.45	0.0	
J31	JUNCTION	262.25	0.70	0.0	
J32	JUNCTION	257.45	0.50	0.0	
J33	JUNCTION	231.15	0.70	0.0	
J34	JUNCTION	261.90	0.70	0.0	
J35	JUNCTION	261.97	0.50	0.0	
J36	JUNCTION	232.08	0.70	0.0	
J37	JUNCTION	231.00	0.70	0.0	
J38	JUNCTION	230.93	0.70	0.0	

J39	JUNCTION	230.19	0.70	0.0
J4	JUNCTION	260.94	0.50	0.0
J40	JUNCTION	229.41	0.70	0.0
J41	JUNCTION	262.00	0.90	0.0
J42	JUNCTION	261.74	0.50	0.0
J43	JUNCTION	257.37	0.90	0.0
J44	JUNCTION	262.00	0.90	0.0
J45	JUNCTION	261.82	0.50	0.0
J46	JUNCTION	262.13	0.90	0.0
J47	JUNCTION	260.50	0.50	0.0
J48	JUNCTION	261.73	0.50	0.0
J49	JUNCTION	241.06	0.70	0.0
J5	JUNCTION	264.15	0.70	0.0
J50	JUNCTION	260.76	0.60	0.0
J51	JUNCTION	239.73	0.70	0.0
J54	JUNCTION	236.80	0.70	0.0
J55	JUNCTION	235.75	0.70	0.0
J56	JUNCTION	234.13	0.70	0.0
J57	JUNCTION	233.21	0.70	0.0
J58	JUNCTION	231.74	0.70	0.0
J59	JUNCTION	230.65	0.70	0.0
J6	JUNCTION	260.83	0.90	0.0
J60	JUNCTION	250.16	0.90	0.0
J61	JUNCTION	261.50	0.60	0.0
J62	JUNCTION	228.45	0.70	0.0
J63	JUNCTION	227.47	0.70	0.0
J7	JUNCTION	263.45	0.70	0.0
J8	JUNCTION	263.37	0.90	0.0
J82	JUNCTION	261.20	0.90	0.0
J9	JUNCTION	262.95	0.90	0.0
STM-MH-EX	JUNCTION	258.42	4.38	0.0
J16	OUTFALL	263.13	0.50	0.0
OF1	OUTFALL	0.00	0.00	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	0.00	0.00	0.0
OF4	OUTFALL	225.00	0.70	0.0
Outlet1	OUTFALL	258.06	1.00	0.0
Outlet2_1	OUTFALL	256.93	0.70	0.0
Outlet2_2	OUTFALL	257.00	0.70	0.0
Outlet2_3	OUTFALL	257.31	0.45	0.0
Outlet2_4	OUTFALL	256.50	0.50	0.0
Outlet2_5	OUTFALL	0.00	0.00	0.0
Outlet3	OUTFALL	260.20	0.61	0.0
Outlet4	OUTFALL	261.10	0.50	0.0
Outlet5_1	OUTFALL	249.70	0.90	0.0
Outlet5_2	OUTFALL	250.23	0.60	0.0
Outlet6-1	OUTFALL	226.62	0.90	0.0
Outlet6-2	OUTFALL	226.86	0.70	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J18	J82	CONDUIT	21.9	1.6441	0.0130
C10	J14	J59	CONDUIT	9.8	9.6363	0.0130
C11	J10	J11	CONDUIT	40.5	1.2853	0.0270
C12	J11	J1	CONDUIT	131.5	1.5743	0.0270
C13	J25	Outlet5_1	CONDUIT	5.1	-1.5688	0.0270
C14	J28	J29	CONDUIT	185.3	7.1363	0.0270
C15	J15	J16	CONDUIT	145.3	0.6607	0.0270
C16	J17	J19	CONDUIT	97.3	1.1892	0.0270
C17	J19	J20	CONDUIT	10.0	0.9400	0.0130

C18	J20	J18	CONDUIT	60.7	0.6738	0.0270
C19	J21	J22	CONDUIT	137.6	1.1193	0.0270
C2	J23	J47	CONDUIT	11.4	0.4398	0.0130
C20	J22	J27	CONDUIT	224.2	2.1682	0.0270
C21	J24	J30	CONDUIT	143.1	1.2997	0.0270
C22	J29	Outlet6-1	CONDUIT	145.0	3.0566	0.0270
C23	J4	Outlet2_4	CONDUIT	249.7	1.7784	0.0270
C24	J27	J32	CONDUIT	35.5	0.5916	0.0270
C25	J32	Outlet2_3	CONDUIT	24.8	0.5645	0.0130
C26	J30	J31	CONDUIT	27.6	1.7756	0.0130
C27	J31	Outlet2_1	CONDUIT	264.6	2.0110	0.0270
C28	J34	Outlet2_2	CONDUIT	420.5	1.1654	0.0270
C29	J35	J6	CONDUIT	140.6	0.8108	0.0270
C3	J9	J10	CONDUIT	37.8	0.3968	0.0130
C30	J26	J23	CONDUIT	142.9	1.4764	0.0270
C31	J49	J51	CONDUIT	12.0	11.1520	0.0130
C32	J42	J3	CONDUIT	60.0	0.1833	0.0270
C33	J41	J3	CONDUIT	105.4	0.3510	0.0270
C34	J44	J43	CONDUIT	156.9	2.9554	0.0270
C35	J46	J61	CONDUIT	109.9	0.5733	0.0270
C36	J45	J61	CONDUIT	61.3	0.5220	0.0270
C37	J82	DICB1	CONDUIT	43.8	4.0673	0.0270
C4	J2	J48	CONDUIT	109.6	0.8668	0.0270
C40	J61	Outlet4	CONDUIT	2.1	19.4029	0.0270
C41	J43	J12	CONDUIT	7.1	3.4528	0.0240
C42	J47	Outlet3	CONDUIT	5.1	3.6918	0.0250
C43	J37	J38	CONDUIT	11.0	0.6364	0.0130
C44	J12	J60	CONDUIT	108.7	6.4161	0.0270
C45	J50	Outlet5_2	CONDUIT	268.0	3.9316	0.0270
C48	J39	J40	CONDUIT	9.5	8.2383	0.0130
C49	J38	J39	CONDUIT	19.5	3.7976	0.0270
C5	J13	J14	CONDUIT	239.1	7.7174	0.0270
C50	J40	Outlet6-2	CONDUIT	47.4	5.3875	0.0270
C51	DICB1	STM-MH-EX	CONDUIT	3.0	35.3553	0.0130
C52	J54	J55	CONDUIT	11.5	9.1687	0.0130
C53	J56	J57	CONDUIT	14.8	6.2283	0.0130
C54	J51	J54	CONDUIT	34.7	8.4667	0.0270
C55	J55	J56	CONDUIT	25.4	6.3884	0.0270
C56	J57	J36	CONDUIT	29.3	3.8608	0.0270
C57	J36	J58	CONDUIT	10.0	3.4020	0.0130
C58	J58	J33	CONDUIT	20.1	2.9337	0.0270
C59	J59	J62	CONDUIT	21.4	10.3254	0.0270
C60	J62	J63	CONDUIT	12.3	7.9929	0.0130
C61	J63	OF4	CONDUIT	18.1	13.7443	0.0270
C7	J7	J8	CONDUIT	18.9	0.4233	0.0240
C8	J60	J25	CONDUIT	27.3	1.9784	0.0130
C9	J8	J9	CONDUIT	44.1	0.9524	0.0270
CW-1	J1	STM-MH-EX	CONDUIT	80.0	2.2381	0.0240
CW-2	STM-MH-EX	Outlet1	CONDUIT	41.1	0.8759	0.0130
CW-3	J6	J23	CONDUIT	39.4	0.7103	0.0130
CW-4	J3	J61	CONDUIT	15.3	0.8475	0.0130
CW-5	J33	J29	CONDUIT	14.6	0.6849	0.0130
CW-6	J48	J4	CONDUIT	44.2	1.7876	0.0130
DI4	J5	J7	CONDUIT	71.7	0.9763	0.0270

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.45	0.16	0.11	0.45	1	0.37
C10	CIRCULAR	0.45	0.16	0.11	0.45	1	0.89

C11	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.95
C12	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	5.47
C13	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	9.70
C14	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	1.91
C15	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.69
C16	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	8.45
C17	CIRCULAR	0.45	0.16	0.11	0.45	1	0.28
C18	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	6.36
C19	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.20
C2	CIRCULAR	0.38	0.11	0.09	0.38	1	0.12
C20	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	3.06
C21	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	0.81
C22	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.54
C23	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.77
C24	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	1.20
C25	CIRCULAR	0.45	0.16	0.11	0.45	1	0.21
C26	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
C27	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	6.19
C28	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.71
C29	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.87
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.18
C30	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.52
C31	CIRCULAR	0.45	0.16	0.11	0.45	1	0.95
C32	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	0.89
C33	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.23
C34	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.32
C35	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.57
C36	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.50
C37	Ditch3	0.38	0.88	0.22	3.75	1	2.42
C4	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.93
C40	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	6.87
C41	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C42	TRAPEZOIDAL	0.50	0.75	0.27	2.50	1	2.43
C43	CIRCULAR	0.45	0.16	0.11	0.45	1	0.23
C44	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	19.62
C45	TRAPEZOIDAL	0.60	1.68	0.35	4.60	1	6.13
C48	CIRCULAR	0.45	0.16	0.11	0.45	1	0.82
C49	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.50
C5	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.12
C50	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	10.13
C51	CIRCULAR	0.30	0.07	0.07	0.30	1	0.58
C52	CIRCULAR	0.45	0.16	0.11	0.45	1	0.86
C53	CIRCULAR	0.45	0.16	0.11	0.45	1	0.71
C54	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.69
C55	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	11.03
C56	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.57
C57	CIRCULAR	0.45	0.16	0.11	0.45	1	0.53
C58	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	7.47
C59	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	14.02
C60	CIRCULAR	0.45	0.16	0.11	0.45	1	0.81
C61	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	16.17
C7	CIRCULAR	0.45	0.16	0.11	0.45	1	0.10
C8	CIRCULAR	0.45	0.16	0.11	0.45	1	0.40
C9	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	7.56
CW-1	CIRCULAR	1.20	1.13	0.30	1.20	1	3.16
CW-2	RECT_CLOSED	1.00	0.92	0.24	0.92	1	2.54
CW-3	CIRCULAR	0.60	0.28	0.15	0.60	1	0.52
CW-4	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
CW-5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.51
CW-6	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
DI4	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.31

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Transect Summary
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Transect Ditch1
Area:
            0.0016     0.0062     0.0123     0.0191     0.0265
            0.0346     0.0432     0.0525     0.0625     0.0730
            0.0842     0.0960     0.1084     0.1214     0.1351
            0.1494     0.1643     0.1798     0.1960     0.2128
            0.2302     0.2482     0.2669     0.2862     0.3061
            0.3266     0.3478     0.3696     0.3920     0.4150
            0.4387     0.4630     0.4879     0.5134     0.5396
            0.5664     0.5937     0.6217     0.6503     0.6795
            0.7093     0.7397     0.7708     0.8024     0.8346
            0.8671     0.8999     0.9329     0.9663     1.0000
Hrad:
            0.0180     0.0387     0.0679     0.0957     0.1216
            0.1462     0.1697     0.1924     0.2143     0.2357
            0.2566     0.2770     0.2972     0.3170     0.3366
            0.3559     0.3751     0.3941     0.4129     0.4316
            0.4502     0.4687     0.4871     0.5054     0.5236
            0.5418     0.5598     0.5779     0.5958     0.6137
            0.6316     0.6495     0.6672     0.6850     0.7028
            0.7209     0.7389     0.7569     0.7749     0.7928
            0.8107     0.8286     0.8464     0.8642     0.8868
            0.9131     0.9392     0.9652     0.9910     1.0000
Width:
            0.0915     0.1662     0.1887     0.2069     0.2250
            0.2432     0.2614     0.2796     0.2978     0.3159
            0.3341     0.3523     0.3705     0.3887     0.4068
            0.4250     0.4432     0.4614     0.4796     0.4978
            0.5159     0.5341     0.5523     0.5705     0.5887
            0.6068     0.6250     0.6432     0.6614     0.6796
            0.6977     0.7159     0.7341     0.7523     0.7703
            0.7881     0.8058     0.8234     0.8411     0.8587
            0.8763     0.8940     0.9116     0.9292     0.9417
            0.9501     0.9584     0.9668     0.9752     1.0000

Transect Ditch2
Area:
            0.0008     0.0045     0.0092     0.0145     0.0205
            0.0272     0.0346     0.0426     0.0513     0.0607
            0.0708     0.0815     0.0929     0.1050     0.1177
            0.1311     0.1452     0.1599     0.1754     0.1914
            0.2082     0.2256     0.2436     0.2622     0.2816
            0.3015     0.3221     0.3434     0.3653     0.3879
            0.4113     0.4355     0.4606     0.4864     0.5132
            0.5407     0.5691     0.5983     0.6284     0.6592
            0.6909     0.7232     0.7564     0.7903     0.8246
            0.8592     0.8940     0.9291     0.9644     1.0000
Hrad:
            0.0150     0.0373     0.0659     0.0920     0.1163
            0.1393     0.1614     0.1828     0.2037     0.2242
            0.2443     0.2641     0.2837     0.3031     0.3224
            0.3415     0.3604     0.3793     0.3981     0.4168
            0.4365     0.4556     0.4746     0.4934     0.5122
            0.5309     0.5496     0.5682     0.5867     0.6024
            0.6165     0.6308     0.6454     0.6603     0.6752
            0.6904     0.7057     0.7212     0.7368     0.7536
            0.7711     0.7886     0.8062     0.8250     0.8546
            0.8840     0.9133     0.9423     0.9712     1.0000
Width:
            0.0567     0.1218     0.1406     0.1594     0.1782
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            0.1970     0.2158     0.2346     0.2534     0.2722
            0.2911     0.3099     0.3287     0.3475     0.3663
            0.3851     0.4039     0.4227     0.4415     0.4603
            0.4778     0.4958     0.5139     0.5321     0.5502
            0.5683     0.5864     0.6046     0.6227     0.6441
            0.6674     0.6906     0.7139     0.7372     0.7605
            0.7837     0.8070     0.8303     0.8536     0.8755
            0.8967     0.9179     0.9390     0.9587     0.9656
            0.9725     0.9794     0.9862     0.9931     1.0000

Transect Ditch3
Area:
            0.0017     0.0053     0.0108     0.0182     0.0266
            0.0355     0.0451     0.0551     0.0657     0.0769
            0.0886     0.1009     0.1137     0.1271     0.1410
            0.1555     0.1705     0.1861     0.2023     0.2190
            0.2363     0.2542     0.2730     0.2925     0.3128
            0.3339     0.3557     0.3784     0.4018     0.4260
            0.4509     0.4766     0.5030     0.5296     0.5566
            0.5838     0.6114     0.6393     0.6675     0.6960
            0.7249     0.7542     0.7837     0.8136     0.8438
            0.8744     0.9053     0.9365     0.9681     1.0000
Hrad:
            0.0212     0.0392     0.0565     0.0753     0.1029
            0.1291     0.1542     0.1783     0.2016     0.2243
            0.2464     0.2680     0.2891     0.3098     0.3302
            0.3502     0.3699     0.3894     0.4087     0.4277
            0.4466     0.4605     0.4741     0.4879     0.5019
            0.5162     0.5308     0.5457     0.5607     0.5758
            0.5910     0.6063     0.6291     0.6537     0.6780
            0.7017     0.7244     0.7468     0.7690     0.7910
            0.8127     0.8343     0.8556     0.8767     0.8977
            0.9185     0.9391     0.9596     0.9799     1.0000
Width:
            0.0839     0.1424     0.2010     0.2532     0.2705
            0.2877     0.3050     0.3222     0.3395     0.3567
            0.3740     0.3912     0.4085     0.4257     0.4430
            0.4604     0.4779     0.4953     0.5128     0.5302
            0.5477     0.5716     0.5962     0.6207     0.6453
            0.6698     0.6940     0.7181     0.7421     0.7662
            0.7902     0.8143     0.8267     0.8356     0.8446
            0.8540     0.8645     0.8749     0.8853     0.8957
            0.9062     0.9166     0.9270     0.9374     0.9479
            0.9583     0.9687     0.9791     0.9896     1.0000

Transect Ditch4
Area:
            0.0026     0.0072     0.0124     0.0184     0.0251
            0.0324     0.0405     0.0493     0.0588     0.0690
            0.0799     0.0915     0.1038     0.1168     0.1305
            0.1448     0.1599     0.1757     0.1923     0.2095
            0.2276     0.2464     0.2658     0.2858     0.3064
            0.3275     0.3493     0.3716     0.3945     0.4180
            0.4421     0.4667     0.4920     0.5178     0.5442
            0.5712     0.5988     0.6270     0.6558     0.6852
            0.7152     0.7458     0.7768     0.8080     0.8395
            0.8711     0.9030     0.9351     0.9675     1.0000
Hrad:
            0.0209     0.0491     0.0744     0.0976     0.1194
            0.1402     0.1603     0.1798     0.1988     0.2175
            0.2359     0.2542     0.2723     0.2903     0.3080
            0.3257     0.3431     0.3597     0.3762     0.3927
            0.4092     0.4258     0.4455     0.4650     0.4843
            0.5034     0.5223     0.5411     0.5598     0.5783
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            0.5967     0.6150     0.6332     0.6512     0.6687
            0.6862     0.7036     0.7210     0.7383     0.7556
            0.7728     0.7909     0.8176     0.8441     0.8705
            0.8967     0.9227     0.9486     0.9744     1.0000
Width:
            0.1288     0.1504     0.1719     0.1935     0.2151
            0.2367     0.2582     0.2798     0.3014     0.3229
            0.3445     0.3658     0.3871     0.4084     0.4297
            0.4510     0.4725     0.4952     0.5180     0.5407
            0.5635     0.5860     0.6038     0.6216     0.6393
            0.6571     0.6748     0.6926     0.7103     0.7281
            0.7458     0.7636     0.7813     0.7992     0.8176
            0.8361     0.8545     0.8729     0.8913     0.9098
            0.9282     0.9456     0.9524     0.9592     0.9660
            0.9728     0.9796     0.9864     0.9932     1.0000

Transect Ditch5
Area:
            0.0007     0.0027     0.0060     0.0106     0.0163
            0.0229     0.0301     0.0381     0.0466     0.0559
            0.0659     0.0765     0.0878     0.0997     0.1124
            0.1257     0.1397     0.1544     0.1697     0.1857
            0.2024     0.2197     0.2376     0.2562     0.2755
            0.2954     0.3159     0.3371     0.3590     0.3815
            0.4047     0.4285     0.4531     0.4785     0.5048
            0.5319     0.5599     0.5888     0.6185     0.6492
            0.6806     0.7129     0.7461     0.7802     0.8151
            0.8509     0.8873     0.9242     0.9618     1.0000
Hrad:
            0.0195     0.0390     0.0592     0.0796     0.1021
            0.1289     0.1543     0.1787     0.2023     0.2252
            0.2476     0.2696     0.2913     0.3127     0.3338
            0.3548     0.3756     0.3962     0.4171     0.4381
            0.4588     0.4794     0.4999     0.5204     0.5407
            0.5609     0.5811     0.6012     0.6212     0.6412
            0.6611     0.6810     0.6956     0.7103     0.7252
            0.7405     0.7559     0.7716     0.7875     0.8036
            0.8199     0.8363     0.8528     0.8693     0.8859
            0.9067     0.9302     0.9536     0.9769     1.0000
Width:
            0.0348     0.0695     0.1028     0.1344     0.1618
            0.1794     0.1969     0.2145     0.2321     0.2496
            0.2672     0.2847     0.3023     0.3198     0.3374
            0.3549     0.3725     0.3901     0.4071     0.4240
            0.4410     0.4579     0.4749     0.4918     0.5087
            0.5257     0.5426     0.5596     0.5765     0.5935
            0.6104     0.6274     0.6495     0.6719     0.6943
            0.7167     0.7391     0.7616     0.7840     0.8064
            0.8288     0.8512     0.8737     0.8963     0.9190
            0.9375     0.9531     0.9687     0.9844     1.0000

Transect Ditch6
Area:
            0.0027     0.0089     0.0159     0.0235     0.0319
            0.0409     0.0507     0.0612     0.0724     0.0843
            0.0970     0.1103     0.1243     0.1391     0.1546
            0.1707     0.1873     0.2044     0.2220     0.2401
            0.2587     0.2777     0.2973     0.3173     0.3378
            0.3588     0.3802     0.4022     0.4246     0.4476
            0.4710     0.4949     0.5194     0.5442     0.5693
            0.5946     0.6203     0.6464     0.6731     0.7002
            0.7278     0.7558     0.7843     0.8133     0.8428
            0.8727     0.9033     0.9347     0.9670     1.0000
Hrad:
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            0.0161     0.0463     0.0740     0.0997     0.1239
            0.1470     0.1691     0.1906     0.2114     0.2317
            0.2517     0.2713     0.2906     0.3097     0.3285
            0.3505     0.3732     0.3956     0.4177     0.4394
            0.4608     0.4820     0.5030     0.5237     0.5442
            0.5645     0.5846     0.6046     0.6244     0.6441
            0.6636     0.6830     0.7014     0.7275     0.7534
            0.7775     0.7967     0.8158     0.8348     0.8537
            0.8726     0.8914     0.9101     0.9288     0.9474
            0.9639     0.9723     0.9811     0.9904     1.0000
Width:
            0.1730     0.1966     0.2179     0.2392     0.2605
            0.2818     0.3031     0.3244     0.3457     0.3670
            0.3883     0.4096     0.4309     0.4522     0.4735
            0.4898     0.5043     0.5188     0.5333     0.5478
            0.5624     0.5769     0.5914     0.6059     0.6204
            0.6349     0.6494     0.6639     0.6785     0.6930
            0.7075     0.7220     0.7380     0.7453     0.7527
            0.7617     0.7757     0.7897     0.8037     0.8177
            0.8317     0.8457     0.8597     0.8737     0.8877
            0.9037     0.9278     0.9519     0.9759     1.0000

Transect Ditch7
Area:
            0.0009     0.0049     0.0096     0.0151     0.0213
            0.0283     0.0359     0.0443     0.0534     0.0632
            0.0737     0.0850     0.0969     0.1096     0.1230
            0.1371     0.1520     0.1675     0.1838     0.2008
            0.2186     0.2370     0.2562     0.2761     0.2967
            0.3180     0.3401     0.3629     0.3864     0.4106
            0.4356     0.4612     0.4876     0.5147     0.5425
            0.5706     0.5991     0.6279     0.6570     0.6865
            0.7163     0.7465     0.7770     0.8078     0.8389
            0.8704     0.9023     0.9344     0.9669     1.0000
Hrad:
            0.0174     0.0403     0.0685     0.0941     0.1179
            0.1405     0.1623     0.1834     0.2040     0.2242
            0.2440     0.2636     0.2830     0.3023     0.3213
            0.3402     0.3590     0.3777     0.3963     0.4148
            0.4333     0.4517     0.4701     0.4885     0.5068
            0.5251     0.5433     0.5615     0.5797     0.5979
            0.6160     0.6345     0.6535     0.6724     0.6906
            0.7152     0.7396     0.7636     0.7873     0.8108
            0.8339     0.8568     0.8794     0.9018     0.9239
            0.9459     0.9676     0.9891     1.0104     1.0000
Width:
            0.0725     0.1294     0.1505     0.1715     0.1925
            0.2136     0.2346     0.2557     0.2767     0.2978
            0.3188     0.3399     0.3609     0.3820     0.4030
            0.4241     0.4453     0.4665     0.4876     0.5088
            0.5299     0.5511     0.5722     0.5934     0.6145
            0.6357     0.6568     0.6780     0.6991     0.7203
            0.7414     0.7622     0.7821     0.8066     0.8194
            0.8292     0.8390     0.8488     0.8586     0.8684
            0.8782     0.8880     0.8978     0.9076     0.9174
            0.9272     0.9370     0.9468     0.9566     1.0000

Transect Ditch8
Area:
            0.0023     0.0092     0.0192     0.0298     0.0409
            0.0525     0.0644     0.0768     0.0896     0.1029
            0.1167     0.1310     0.1458     0.1610     0.1768
            0.1930     0.2097     0.2270     0.2446     0.2628
            0.2815     0.3007     0.3203     0.3405     0.3611
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            0.3821     0.4035     0.4253     0.4474     0.4699
            0.4928     0.5161     0.5397     0.5638     0.5882
            0.6130     0.6382     0.6638     0.6897     0.7161
            0.7428     0.7699     0.7974     0.8253     0.8536
            0.8822     0.9112     0.9405     0.9700     1.0000
Hrad:
            0.0160     0.0324     0.0596     0.0874     0.1138
            0.1406     0.1664     0.1915     0.2146     0.2370
            0.2588     0.2801     0.3009     0.3213     0.3414
            0.3611     0.3805     0.3996     0.4184     0.4370
            0.4554     0.4737     0.4917     0.5095     0.5272
            0.5492     0.5707     0.5911     0.6114     0.6315
            0.6514     0.6712     0.6908     0.7104     0.7298
            0.7491     0.7682     0.7873     0.8062     0.8251
            0.8439     0.8625     0.8811     0.8996     0.9181
            0.9366     0.9575     0.9783     0.9989     1.0000
Width:
            0.1514     0.2983     0.3357     0.3537     0.3718
            0.3847     0.3977     0.4107     0.4264     0.4423
            0.4582     0.4742     0.4901     0.5061     0.5220
            0.5379     0.5539     0.5698     0.5858     0.6017
            0.6177     0.6336     0.6495     0.6655     0.6814
            0.6923     0.7036     0.7161     0.7286     0.7411
            0.7536     0.7662     0.7787     0.7912     0.8037
            0.8163     0.8288     0.8413     0.8538     0.8663
            0.8789     0.8914     0.9039     0.9164     0.9290
            0.9413     0.9509     0.9605     0.9701     1.0000

Transect Ditch9
Area:
            0.0017     0.0045     0.0080     0.0123     0.0173
            0.0231     0.0296     0.0368     0.0448     0.0535
            0.0630     0.0732     0.0841     0.0958     0.1082
            0.1214     0.1353     0.1500     0.1654     0.1815
            0.1984     0.2160     0.2344     0.2536     0.2735
            0.2942     0.3156     0.3378     0.3607     0.3844
            0.4089     0.4341     0.4602     0.4870     0.5149
            0.5434     0.5723     0.6017     0.6316     0.6620
            0.6928     0.7241     0.7559     0.7881     0.8208
            0.8540     0.8877     0.9218     0.9587     1.0000
Hrad:
            0.0322     0.0651     0.0937     0.1202     0.1454
            0.1697     0.1936     0.2171     0.2403     0.2633
            0.2862     0.3089     0.3316     0.3541     0.3766
            0.3991     0.4215     0.4438     0.4660     0.4881
            0.5101     0.5321     0.5542     0.5762     0.5983
            0.6202     0.6420     0.6638     0.6857     0.7075
            0.7294     0.7509     0.7721     0.7934     0.8088
            0.8401     0.8712     0.9020     0.9326     0.9627
            0.9925     1.0221     1.0515     1.0807     1.1098
            1.1386     1.1673     1.1829     1.1056     1.0000
Width:
            0.0535     0.0698     0.0862     0.1025     0.1188
            0.1352     0.1515     0.1678     0.1842     0.2005
            0.2169     0.2332     0.2495     0.2659     0.2822
            0.2986     0.3149     0.3312     0.3477     0.3643
            0.3809     0.3975     0.4141     0.4307     0.4473
            0.4640     0.4808     0.4976     0.5144     0.5313
            0.5481     0.5653     0.5827     0.6002     0.6234
            0.6336     0.6438     0.6540     0.6641     0.6745
            0.6849     0.6953     0.7057     0.7162     0.7266
            0.7370     0.7474     0.7668     0.8596     1.0000
```

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*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 11/23/2020 00:00:00
Ending Date .............. 11/24/2020 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:00:05
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 5.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         1.187        80.310
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.460        31.105
Surface Runoff ...........         0.698        47.242
Final Storage ............         0.030         2.039
Continuity Error (%) .....        -0.094


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.698         6.982
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         0.698         6.980
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.002
Continuity Error (%) .....         0.001


**************************
Time-Step Critical Elements
```

****
Link C40 (71.90%)

****
Highest Flow Instability Indexes
****
Link CW-1 (13)
Link C61 (13)
Link CW-5 (12)
Link CW-2 (10)
Link C31 (9)

****
Routing Time Step Summary
****
Minimum Time Step : 0.62 sec
Average Time Step : 2.55 sec
Maximum Time Step : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00
Time Step Frequencies :
5.000 - 3.155 sec : 35.95 %
3.155 - 1.991 sec : 9.80 %
1.991 - 1.256 sec : 16.67 %
1.256 - 0.792 sec : 25.10 %
0.792 - 0.500 sec : 12.48 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Tota Runo 10^6 l
D1	80.31	0.00	0.00	42.30	0.79	33.05	33.84	0.1
D10	80.31	0.00	0.00	42.30	0.79	34.66	35.45	0.1
D11	80.31	0.00	0.00	42.30	0.79	35.88	36.67	0.0
D12	80.31	0.00	0.00	42.30	0.79	32.98	33.77	0.2
D13	80.31	0.00	0.00	42.30	0.79	35.40	36.19	0.0
D15	80.31	0.00	0.00	42.30	0.79	35.95	36.74	0.0
D16	80.31	0.00	0.00	42.30	0.79	34.97	35.76	0.0
D17	80.31	0.00	0.00	41.72	0.79	36.58	37.37	0.0
D2	80.31	0.00	0.00	41.11	0.79	37.24	38.03	0.0
D2_1	80.31	0.00	0.00	42.08	0.79	36.22	37.01	0.0
D20	80.31	0.00	0.00	42.30	0.79	35.06	35.85	0.0
D21	80.31	0.00	0.00	42.05	0.79	36.26	37.05	0.0
D22	80.31	0.00	0.00	42.30	0.79	35.73	36.52	0.0
D23	80.31	0.00	0.00	42.30	0.79	34.91	35.71	0.0
D24	80.31	0.00	0.00	42.30	0.79	35.00	35.79	0.0
D25	80.31	0.00	0.00	42.30	0.79	35.40	36.19	0.0
D27	80.31	0.00	0.00	40.72	0.79	37.67	38.46	0.0
D28	80.31	0.00	0.00	40.53	0.79	37.89	38.68	0.0
D29	80.31	0.00	0.00	41.56	0.79	36.75	37.54	0.0
D3	80.31	0.00	0.00	42.30	0.79	35.95	36.74	0.0
D4	80.31	0.00	0.00	41.92	0.79	36.38	37.17	0.0
D40	80.31	0.00	0.00	40.83	0.79	37.53	38.32	0.0
D41	80.31	0.00	0.00	40.67	0.79	37.73	38.52	0.0
D5	80.31	0.00	0.00	42.30	0.79	35.27	36.06	0.0

Post Develpoment- 100-Year Storm Event

D6	80.31	0.00	0.00	42.30	0.79	35.90	36.70	0.0
D7	80.31	0.00	0.00	42.30	0.79	35.53	36.32	0.0
D8	80.31	0.00	0.00	42.30	0.79	35.66	36.45	0.0
D9	80.31	0.00	0.00	42.30	0.79	34.50	35.30	0.0
EXT1	80.31	0.00	0.00	39.64	5.53	33.92	39.45	0.4
EXT10	80.31	0.00	0.00	38.78	5.53	34.81	40.34	0.2
EXT2	80.31	0.00	0.00	39.71	5.53	33.84	39.37	0.2
EXT3	80.31	0.00	0.00	39.74	5.53	32.99	38.52	0.1
EXT4	80.31	0.00	0.00	38.49	5.54	35.11	40.65	0.0
EXT5	80.31	0.00	0.00	39.74	5.53	31.30	36.83	0.0
EXT6	80.31	0.00	0.00	39.74	5.53	33.43	38.96	0.1
EXT7	80.31	0.00	0.00	39.74	5.53	30.15	35.68	0.2
EXT8	80.31	0.00	0.00	39.74	5.53	31.96	37.49	0.2
EXT9	80.31	0.00	0.00	39.61	5.53	33.95	39.48	1.0
G	80.31	0.00	0.00	42.30	0.79	35.51	36.30	0.0
G1	80.31	0.00	0.00	42.30	0.79	35.43	36.22	0.0
G10	80.31	0.00	0.00	40.64	0.79	37.77	38.56	0.0
G2	80.31	0.00	0.00	42.30	0.79	35.26	36.05	0.0
G3	80.31	0.00	0.00	42.30	0.79	34.19	34.98	0.0
G4	80.31	0.00	0.00	41.17	0.79	37.16	37.95	0.0
G5	80.31	0.00	0.00	41.56	0.79	36.77	37.56	0.0
G6	80.31	0.00	0.00	42.30	0.79	35.11	35.90	0.0
G7	80.31	0.00	0.00	42.30	0.79	35.96	36.75	0.0
G8	80.31	0.00	0.00	42.19	0.79	36.11	36.90	0.0
P1	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
R1	80.31	0.00	0.00	0.93	75.03	2.90	77.92	0.0
R10	80.31	0.00	0.00	0.93	75.07	2.90	77.98	0.0
R12	80.31	0.00	0.00	0.93	75.08	2.91	77.99	0.0
R13_14	80.31	0.00	0.00	0.93	75.02	2.90	77.92	0.0
R15	80.31	0.00	0.00	0.93	75.02	2.90	77.92	0.0
R16	80.31	0.00	0.00	0.93	75.10	2.91	78.01	0.0
R17_1	80.31	0.00	0.00	0.93	75.10	2.91	78.00	0.0
R17_2	80.31	0.00	0.00	0.93	75.02	2.90	77.92	0.0
R18	80.31	0.00	0.00	14.00	19.76	42.38	62.14	0.0
R19	80.31	0.00	0.00	0.93	74.95	2.89	77.83	0.1
R2	80.31	0.00	0.00	0.93	75.03	2.90	77.92	0.0
R20	80.31	0.00	0.00	0.93	74.98	2.89	77.87	0.1
R22	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
R23_25	80.31	0.00	0.00	0.93	75.01	2.90	77.91	0.0
R24	80.31	0.00	0.00	0.93	75.01	2.90	77.90	0.0
R26	80.31	0.00	0.00	0.93	75.06	2.91	77.96	0.0
R26_2	80.31	0.00	0.00	0.93	75.06	2.91	77.96	0.0
R27	80.31	0.00	0.00	0.93	75.07	2.91	77.98	0.0
R28	80.31	0.00	0.00	0.93	75.07	2.91	77.98	0.0
R29	80.31	0.00	0.00	0.93	75.07	2.90	77.97	0.0
R3	80.31	0.00	0.00	0.93	75.01	2.90	77.91	0.0
R30	80.31	0.00	0.00	0.93	75.07	2.90	77.97	0.0
R31	80.31	0.00	0.00	0.93	75.06	2.90	77.96	0.0
R32	80.31	0.00	0.00	0.93	75.06	2.90	77.96	0.0
R33	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
R34	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
R35_2	80.31	0.00	0.00	0.93	75.10	2.91	78.01	0.0
R36	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
R37	80.31	0.00	0.00	0.93	75.04	2.90	77.94	0.1
R38	80.31	0.00	0.00	0.93	75.10	2.91	78.00	0.0
R39	80.31	0.00	0.00	1.87	71.10	5.79	76.89	0.1
R39_1	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R4	80.31	0.00	0.00	0.93	75.01	2.90	77.91	0.0
R40_2	80.31	0.00	0.00	1.87	71.13	5.80	76.93	0.0
R40_3	80.31	0.00	0.00	1.87	71.14	5.81	76.95	0.0
R40_4	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_1	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_2	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R41_4	80.31	0.00	0.00	1.87	71.11	5.79	76.90	0.0

R41_5	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R42_1	80.31	0.00	0.00	1.87	71.15	5.81	76.95	0.0
R42_3	80.31	0.00	0.00	1.87	71.12	5.79	76.91	0.0
R42_4	80.31	0.00	0.00	1.87	71.12	5.79	76.91	0.0
R6	80.31	0.00	0.00	0.93	75.10	2.91	78.00	0.0
R7	80.31	0.00	0.00	0.93	75.10	2.91	78.01	0.0
R8	80.31	0.00	0.00	0.93	75.09	2.91	78.00	0.0
R9	80.31	0.00	0.00	0.93	75.04	2.90	77.94	0.0
S1	80.31	0.00	0.00	41.69	0.79	36.62	37.41	0.0
S3	80.31	0.00	0.00	1.54	75.02	2.38	77.40	0.0
S4	80.31	0.00	0.00	42.00	0.79	36.31	37.10	0.0
SW1_1	80.31	0.00	0.00	0.93	75.35	2.91	78.26	0.0
SW10	80.31	0.00	0.00	0.93	75.05	2.90	77.95	0.0
SW12	80.31	0.00	0.00	0.93	75.02	2.90	77.92	0.0
SW13	80.31	0.00	0.00	0.93	75.02	2.90	77.91	0.0
SW17	80.31	0.00	0.00	0.93	75.05	2.90	77.95	0.0
SW2	80.31	0.00	0.00	0.93	75.07	2.90	77.98	0.0
SW20	80.31	0.00	0.00	0.93	75.07	2.90	77.98	0.0
SW21	80.31	0.00	0.00	0.93	75.03	2.90	77.93	0.0
SW3	80.31	0.00	0.00	0.93	75.06	2.90	77.96	0.0
SW5	80.31	0.00	0.00	0.93	75.03	2.90	77.92	0.0
SW6	80.31	0.00	0.00	0.93	75.02	2.90	77.92	0.0
SW7	80.31	0.00	0.00	0.93	74.98	2.89	77.88	0.0
SW8	80.31	0.00	0.00	0.93	75.00	2.90	77.90	0.0
SW9	80.31	0.00	0.00	0.93	75.01	2.90	77.91	0.0

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Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
DICB1	JUNCTION	0.01	0.05	259.47	0 02:31	0.05
J1	JUNCTION	0.11	0.26	260.47	0 02:31	0.26
J10	JUNCTION	0.02	0.08	262.88	0 02:30	0.08
J11	JUNCTION	0.03	0.10	262.38	0 02:30	0.10
J12	JUNCTION	0.01	0.03	257.15	0 02:32	0.03
J13	JUNCTION	0.01	0.03	250.02	0 02:30	0.03
J14	JUNCTION	0.07	0.26	231.85	0 02:33	0.26
J15	JUNCTION	0.02	0.08	264.17	0 02:30	0.08
J17	JUNCTION	0.00	0.02	263.24	0 02:30	0.02
J18	JUNCTION	0.04	0.13	261.69	0 02:31	0.13
J19	JUNCTION	0.03	0.09	262.16	0 02:27	0.09
J2	JUNCTION	0.01	0.03	262.71	0 02:30	0.03
J20	JUNCTION	0.01	0.04	262.01	0 02:30	0.04
J21	JUNCTION	0.02	0.07	264.13	0 02:30	0.07
J22	JUNCTION	0.02	0.09	262.61	0 02:30	0.09
J23	JUNCTION	0.10	0.31	260.86	0 02:36	0.31
J24	JUNCTION	0.01	0.03	264.63	0 02:30	0.03
J25	JUNCTION	0.09	0.14	249.76	0 02:32	0.14
J26	JUNCTION	0.01	0.03	262.69	0 02:30	0.03
J27	JUNCTION	0.05	0.16	257.82	0 02:31	0.16
J28	JUNCTION	0.01	0.03	244.27	0 02:30	0.03
J29	JUNCTION	0.04	0.11	231.16	0 02:35	0.11
J3	JUNCTION	0.05	0.13	261.76	0 02:31	0.13
J30	JUNCTION	0.04	0.09	262.83	0 02:25	0.09
J31	JUNCTION	0.02	0.06	262.31	0 02:30	0.06
J32	JUNCTION	0.09	0.35	257.80	0 02:32	0.35
J33	JUNCTION	0.12	0.40	231.55	0 02:35	0.40
J34	JUNCTION	0.03	0.09	261.99	0 02:30	0.09

J35	JUNCTION	0.02	0.07	262.04	0	02:30	0.07
J36	JUNCTION	0.14	0.48	232.56	0	02:34	0.48
J37	JUNCTION	0.02	0.08	231.08	0	02:30	0.08
J38	JUNCTION	0.00	0.01	230.94	0	02:30	0.01
J39	JUNCTION	0.01	0.07	230.26	0	02:31	0.07
J4	JUNCTION	0.02	0.06	261.00	0	02:27	0.06
J40	JUNCTION	0.00	0.02	229.43	0	02:30	0.02
J41	JUNCTION	0.01	0.03	262.03	0	02:30	0.03
J42	JUNCTION	0.01	0.06	261.80	0	02:30	0.06
J43	JUNCTION	0.05	0.13	257.49	0	02:31	0.13
J44	JUNCTION	0.01	0.03	262.03	0	02:30	0.03
J45	JUNCTION	0.01	0.05	261.87	0	02:10	0.05
J46	JUNCTION	0.01	0.04	262.17	0	02:30	0.04
J47	JUNCTION	0.03	0.09	260.59	0	02:36	0.09
J48	JUNCTION	0.03	0.09	261.82	0	02:29	0.09
J49	JUNCTION	0.13	0.50	241.56	0	02:30	0.50
J5	JUNCTION	0.00	0.02	264.17	0	02:30	0.02
J50	JUNCTION	0.01	0.03	260.79	0	02:30	0.03
J51	JUNCTION	0.02	0.08	239.81	0	02:30	0.08
J54	JUNCTION	0.13	0.48	237.28	0	02:31	0.48
J55	JUNCTION	0.03	0.09	235.84	0	02:31	0.09
J56	JUNCTION	0.13	0.48	234.61	0	02:33	0.48
J57	JUNCTION	0.03	0.10	233.31	0	02:33	0.10
J58	JUNCTION	0.03	0.11	231.85	0	02:34	0.11
J59	JUNCTION	0.01	0.05	230.70	0	02:29	0.05
J6	JUNCTION	0.08	0.18	261.01	0	02:31	0.18
J60	JUNCTION	0.05	0.14	250.30	0	02:32	0.14
J61	JUNCTION	0.01	0.05	261.55	0	02:30	0.05
J62	JUNCTION	0.07	0.28	228.73	0	02:29	0.28
J63	JUNCTION	0.01	0.05	227.52	0	02:29	0.05
J7	JUNCTION	0.03	0.08	263.53	0	02:31	0.08
J8	JUNCTION	0.01	0.03	263.40	0	02:30	0.03
J82	JUNCTION	0.02	0.05	261.25	0	02:31	0.05
J9	JUNCTION	0.04	0.11	263.06	0	02:30	0.11
STM-MH-EX	JUNCTION	0.08	0.28	258.70	0	02:32	0.28
J16	OUTFALL	0.01	0.05	263.18	0	02:30	0.05
OF1	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF4	OUTFALL	0.01	0.05	225.05	0	02:29	0.05
Outlet1	OUTFALL	0.04	0.15	258.21	0	02:32	0.15
Outlet2_1	OUTFALL	0.02	0.06	256.99	0	02:30	0.06
Outlet2_2	OUTFALL	0.03	0.08	257.08	0	02:30	0.08
Outlet2_3	OUTFALL	0.06	0.22	257.53	0	02:32	0.22
Outlet2_4	OUTFALL	0.01	0.06	256.56	0	02:27	0.06
Outlet2_5	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet3	OUTFALL	0.00	0.00	260.20	0	00:00	0.00
Outlet4	OUTFALL	0.01	0.05	261.15	0	02:30	0.05
Outlet5_1	OUTFALL	0.01	0.05	249.75	0	02:32	0.05
Outlet5_2	OUTFALL	0.01	0.03	250.26	0	02:30	0.03
Outlet6-1	OUTFALL	0.04	0.11	226.73	0	02:35	0.11
Outlet6-2	OUTFALL	0.00	0.02	226.88	0	02:30	0.02

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent

DICB1	JUNCTION	0.000	0.028	0	02:31	0	0.138	0.005
J1	JUNCTION	0.083	0.201	0	02:30	0.574	1.27	0.275
J10	JUNCTION	0.043	0.064	0	02:30	0.165	0.268	-0.053
J11	JUNCTION	0.057	0.121	0	02:30	0.425	0.694	-0.051
J12	JUNCTION	0.000	0.028	0	02:31	0	0.161	0.074
J13	JUNCTION	0.028	0.028	0	02:30	0.108	0.108	-0.486
J14	JUNCTION	0.064	0.092	0	02:30	0.272	0.38	0.106
J15	JUNCTION	0.038	0.038	0	02:30	0.151	0.151	-0.002
J17	JUNCTION	0.006	0.006	0	02:30	0.0234	0.0234	-0.198
J18	JUNCTION	0.017	0.030	0	02:30	0.0729	0.138	0.138
J19	JUNCTION	0.007	0.014	0	02:30	0.0413	0.0647	0.256
J2	JUNCTION	0.010	0.010	0	02:30	0.0459	0.0459	-0.171
J20	JUNCTION	0.000	0.015	0	02:27	0	0.0646	-0.157
J21	JUNCTION	0.052	0.052	0	02:30	0.206	0.206	-0.042
J22	JUNCTION	0.052	0.104	0	02:30	0.263	0.468	-0.044
J23	JUNCTION	0.009	0.081	0	02:31	0.0523	0.553	0.009
J24	JUNCTION	0.010	0.010	0	02:30	0.039	0.039	-0.316
J25	JUNCTION	0.001	0.033	0	02:31	0.00385	0.188	0.650
J26	JUNCTION	0.012	0.012	0	02:30	0.0498	0.0498	-0.702
J27	JUNCTION	0.004	0.106	0	02:30	0.0494	0.518	0.060
J28	JUNCTION	0.022	0.022	0	02:30	0.0846	0.0846	-0.226
J29	JUNCTION	0.022	0.199	0	02:29	0.0914	1.31	-0.047
J3	JUNCTION	0.006	0.030	0	02:30	0.0543	0.148	0.324
J30	JUNCTION	0.004	0.014	0	02:30	0.0363	0.0754	0.321
J31	JUNCTION	0.046	0.061	0	02:30	0.247	0.322	-0.026
J32	JUNCTION	0.000	0.104	0	02:31	0	0.518	0.070
J33	JUNCTION	0.004	0.170	0	02:34	0.0188	1.13	0.075
J34	JUNCTION	0.085	0.085	0	02:30	0.589	0.589	0.049
J35	JUNCTION	0.049	0.049	0	02:30	0.334	0.334	-0.051
J36	JUNCTION	0.000	0.170	0	02:33	0	1.11	-0.009
J37	JUNCTION	0.006	0.006	0	02:30	0.0231	0.0231	-0.004
J38	JUNCTION	0.000	0.006	0	02:30	0	0.0231	-0.008
J39	JUNCTION	0.001	0.007	0	02:30	0.00387	0.027	0.204
J4	JUNCTION	0.040	0.055	0	02:29	0.166	0.237	-0.047
J40	JUNCTION	0.010	0.019	0	02:30	0.0385	0.0654	-0.095
J41	JUNCTION	0.008	0.008	0	02:30	0.0312	0.0312	-0.305
J42	JUNCTION	0.016	0.016	0	02:30	0.0624	0.0624	-0.227
J43	JUNCTION	0.007	0.029	0	02:30	0.0752	0.161	0.068
J44	JUNCTION	0.022	0.022	0	02:30	0.0857	0.0857	-0.204
J45	JUNCTION	0.016	0.016	0	02:30	0.0623	0.0623	-0.056
J46	JUNCTION	0.014	0.014	0	02:30	0.0545	0.0545	-0.066
J47	JUNCTION	0.000	0.071	0	02:36	0	0.553	-0.013
J48	JUNCTION	0.003	0.013	0	02:30	0.0257	0.0717	0.299
J49	JUNCTION	0.183	0.183	0	02:30	1.11	1.11	-0.039
J5	JUNCTION	0.004	0.004	0	02:30	0.0156	0.0156	-0.212
J50	JUNCTION	0.027	0.027	0	02:30	0.101	0.101	0.000
J51	JUNCTION	0.000	0.183	0	02:30	0	1.12	0.034
J54	JUNCTION	0.000	0.182	0	02:30	0	1.11	-0.002
J55	JUNCTION	0.000	0.173	0	02:31	0	1.11	0.004
J56	JUNCTION	0.000	0.173	0	02:31	0	1.11	-0.007
J57	JUNCTION	0.000	0.170	0	02:33	0	1.11	0.005
J58	JUNCTION	0.000	0.167	0	02:34	0	1.11	0.012
J59	JUNCTION	0.014	0.095	0	02:29	0.0539	0.433	0.033
J6	JUNCTION	0.016	0.064	0	02:30	0.117	0.451	0.185
J60	JUNCTION	0.006	0.033	0	02:30	0.0234	0.184	-0.006
J61	JUNCTION	0.005	0.064	0	02:30	0.0438	0.308	-0.028
J62	JUNCTION	0.000	0.094	0	02:29	0	0.433	-0.082
J63	JUNCTION	0.000	0.096	0	02:29	0	0.434	-0.079
J7	JUNCTION	0.002	0.006	0	02:30	0.0183	0.034	0.315
J8	JUNCTION	0.008	0.014	0	02:30	0.0312	0.0651	-0.030
J82	JUNCTION	0.000	0.028	0	02:31	0	0.137	-0.142
J9	JUNCTION	0.008	0.022	0	02:30	0.0379	0.103	0.141
STM-MH-EX	JUNCTION	0.000	0.222	0	02:31	0	1.4	-0.215
J16	OUTFALL	0.003	0.041	0	02:30	0.0289	0.18	0.000

OF1	OUTFALL	0.004	0.004	0	02:30	0.0156	0.0156	0.000
OF2	OUTFALL	0.004	0.004	0	02:30	0.0156	0.0156	0.000
OF3	OUTFALL	0.016	0.016	0	02:30	0.0616	0.0616	0.000
OF4	OUTFALL	0.000	0.094	0	02:29	0	0.434	0.000
Outlet1	OUTFALL	0.000	0.221	0	02:32	0	1.41	0.000
Outlet2_1	OUTFALL	0.009	0.067	0	02:30	0.0993	0.421	0.000
Outlet2_2	OUTFALL	0.014	0.092	0	02:30	0.216	0.804	0.000
Outlet2_3	OUTFALL	0.000	0.103	0	02:32	0	0.517	0.000
Outlet2_4	OUTFALL	0.004	0.054	0	02:27	0.0398	0.277	0.000
Outlet2_5	OUTFALL	0.018	0.018	0	02:30	0.0941	0.0941	0.000
Outlet3	OUTFALL	0.011	0.076	0	02:32	0.0389	0.592	0.000
Outlet4	OUTFALL	0.000	0.064	0	02:30	0	0.308	0.000
Outlet5_1	OUTFALL	0.003	0.036	0	02:31	0.0115	0.198	0.000
Outlet5_2	OUTFALL	0.008	0.034	0	02:30	0.076	0.177	0.000
Outlet6-1	OUTFALL	0.022	0.212	0	02:31	0.0952	1.4	0.000
Outlet6-2	OUTFALL	0.002	0.020	0	02:30	0.00769	0.0731	0.000

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

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J49	JUNCTION	0.11	0.051	0.199

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Node Flooding Summary
****

No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J16	74.68	0.009	0.041	0.180
OF1	51.34	0.001	0.004	0.016
OF2	51.06	0.001	0.004	0.016
OF3	55.72	0.004	0.016	0.062
OF4	74.86	0.021	0.094	0.434
Outlet1	92.04	0.049	0.221	1.405
Outlet2_1	87.45	0.015	0.067	0.421
Outlet2_2	98.68	0.023	0.092	0.804
Outlet2_3	86.84	0.021	0.103	0.517
Outlet2_4	77.35	0.012	0.054	0.277
Outlet2_5	71.16	0.004	0.018	0.094
Outlet3	93.48	0.020	0.076	0.592
Outlet4	79.55	0.014	0.064	0.308
Outlet5_1	82.34	0.008	0.036	0.198
Outlet5_2	75.12	0.008	0.034	0.177
Outlet6-1	78.81	0.059	0.212	1.405
Outlet6-2	58.53	0.005	0.020	0.073

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System               75.83     0.273     1.132       6.980


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Link Flow Summary
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-------------------------------------------------------------------------------
                                 Maximum  Time of Max   Maximum    Max/    Max/
                                |Flow|   Occurrence   |Veloc|    Full    Full
Link                 Type          CMS  days hr:min     m/sec    Flow   Depth
-------------------------------------------------------------------------------
C1                   CONDUIT     0.028     0  02:31      1.23    0.08    0.20
C10                  CONDUIT     0.080     0  02:29      1.81    0.09    0.34
C11                  CONDUIT     0.064     0  02:30      0.57    0.01    0.13
C12                  CONDUIT     0.119     0  02:30      0.42    0.02    0.26
C13                  CONDUIT     0.033     0  02:32      0.27    0.00    0.10
C14                  CONDUIT     0.022     0  02:30      0.41    0.01    0.23
C15                  CONDUIT     0.038     0  02:30      0.48    0.02    0.13
C16                  CONDUIT     0.006     0  02:30      0.10    0.00    0.06
C17                  CONDUIT     0.015     0  02:27      1.14    0.05    0.15
C18                  CONDUIT     0.013     0  02:30      0.12    0.00    0.09
C19                  CONDUIT     0.052     0  02:30      0.54    0.02    0.16
C2                   CONDUIT     0.071     0  02:36      1.35    0.61    0.52
C20                  CONDUIT     0.102     0  02:30      0.59    0.03    0.25
C21                  CONDUIT     0.010     0  02:30      0.16    0.01    0.20
C22                  CONDUIT     0.194     0  02:35      1.28    0.01    0.13
C23                  CONDUIT     0.051     0  02:27      0.70    0.02    0.12
C24                  CONDUIT     0.104     0  02:31      0.37    0.09    0.51
C25                  CONDUIT     0.103     0  02:32      1.00    0.48    0.63
C26                  CONDUIT     0.015     0  02:25      0.96    0.04    0.18
C27                  CONDUIT     0.059     0  02:30      0.76    0.01    0.09
C28                  CONDUIT     0.081     0  02:30      0.73    0.02    0.12
C29                  CONDUIT     0.048     0  02:30      0.27    0.03    0.25
C3                   CONDUIT     0.021     0  02:30      0.96    0.12    0.21
C30                  CONDUIT     0.011     0  02:30      0.08    0.00    0.33
C31                  CONDUIT     0.183     0  02:30      1.88    0.19    0.59
C32                  CONDUIT     0.016     0  02:30      0.15    0.02    0.19
C33                  CONDUIT     0.008     0  02:30      0.08    0.01    0.17
C34                  CONDUIT     0.022     0  02:30      0.26    0.00    0.09
C35                  CONDUIT     0.014     0  02:30      0.28    0.01    0.09
C36                  CONDUIT     0.016     0  02:30      0.31    0.01    0.10
C37                  CHANNEL     0.028     0  02:31      0.81    0.01    0.13
C4                   CONDUIT     0.010     0  02:30      0.15    0.01    0.12
C40                  CONDUIT     0.064     0  02:30      1.92    0.01    0.10
C41                  CONDUIT     0.028     0  02:31      1.48    0.10    0.17
C42                  CONDUIT     0.071     0  02:36      1.24    0.03    0.17
C43                  CONDUIT     0.006     0  02:30      0.65    0.03    0.11
C44                  CONDUIT     0.027     0  02:32      0.26    0.00    0.09
C45                  CONDUIT     0.027     0  02:30      0.72    0.00    0.06
C48                  CONDUIT     0.009     0  02:29      1.18    0.01    0.10
C49                  CONDUIT     0.006     0  02:30      0.17    0.00    0.06
C5                   CONDUIT     0.028     0  02:30      0.24    0.00    0.20
C50                  CONDUIT     0.018     0  02:30      0.68    0.00    0.03
C51                  CONDUIT     0.028     0  02:31      1.12    0.05    0.55
C52                  CONDUIT     0.173     0  02:31      1.83    0.20    0.60
C53                  CONDUIT     0.170     0  02:33      1.74    0.24    0.61
C54                  CONDUIT     0.182     0  02:30      0.41    0.01    0.40
C55                  CONDUIT     0.173     0  02:31      0.39    0.02    0.40
C56                  CONDUIT     0.170     0  02:33      0.38    0.02    0.41
C57                  CONDUIT     0.167     0  02:34      1.69    0.32    0.62
C58                  CONDUIT     0.167     0  02:35      0.43    0.02    0.36
C59                  CONDUIT     0.094     0  02:29      0.39    0.01    0.23
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C60	CONDUIT	0.096	0	02:29	1.87	0.12	0.36
C61	CONDUIT	0.094	0	02:29	1.68	0.01	0.07
C7	CONDUIT	0.007	0	02:33	0.54	0.06	0.13
C8	CONDUIT	0.032	0	02:32	0.74	0.08	0.31
C9	CONDUIT	0.014	0	02:30	0.15	0.00	0.08
CW-1	CONDUIT	0.193	0	02:31	1.25	0.06	0.23
CW-2	CONDUIT	0.221	0	02:32	1.12	0.09	0.22
CW-3	CONDUIT	0.060	0	02:31	0.72	0.12	0.40
CW-4	CONDUIT	0.029	0	02:31	1.24	0.11	0.20
CW-5	CONDUIT	0.169	0	02:35	1.73	0.33	0.43
CW-6	CONDUIT	0.015	0	02:29	1.01	0.04	0.17
DI4	CONDUIT	0.004	0	02:30	0.09	0.00	0.07

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Flow Classification Summary
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	Adjusted	Fraction of Time in Flow Class							
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.73	0.27	0.00	0.00	0.00	0.77
C10	1.00	0.00	0.00	0.00	0.05	0.95	0.00	0.00	0.00	1.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
C12	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
C13	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.36	0.00
C14	1.00	0.00	0.06	0.00	0.93	0.00	0.00	0.00	0.98	0.00
C15	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04	0.00
C16	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	1.00	0.00
C17	1.00	0.00	0.00	0.00	0.45	0.55	0.00	0.00	0.00	0.28
C18	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.97	0.00
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C2	1.00	0.00	0.00	0.00	0.14	0.86	0.00	0.00	0.00	0.67
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C22	1.00	0.00	0.00	0.00	0.41	0.59	0.00	0.00	0.19	0.00
C23	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C24	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95	0.00
C25	1.00	0.01	0.00	0.00	0.87	0.12	0.00	0.00	0.00	0.51
C26	1.00	0.00	0.01	0.00	0.87	0.13	0.00	0.00	0.00	0.98
C27	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00
C3	1.00	0.00	0.00	0.00	0.70	0.30	0.00	0.00	0.00	0.31
C30	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C31	1.00	0.00	0.00	0.00	0.24	0.76	0.00	0.00	0.00	1.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
C34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.92	0.00
C36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.91	0.00
C37	1.00	0.01	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
C4	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.94	0.00
C40	1.00	0.01	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
C41	1.00	0.00	0.00	0.00	0.14	0.86	0.00	0.00	0.00	0.29
C42	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C43	1.00	0.00	0.00	0.00	0.45	0.54	0.00	0.00	0.00	0.66
C44	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.96	0.00
C45	1.00	0.00	0.00	0.00	0.64	0.36	0.00	0.00	0.25	0.00
C48	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.00	0.99
C49	1.00	0.00	0.24	0.00	0.76	0.00	0.00	0.00	0.99	0.00
C5	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	1.00	0.00

C50	1.00	0.25	0.00	0.00	0.18	0.58	0.00	0.00	0.12	0.00
C51	1.00	0.00	0.01	0.00	0.84	0.15	0.00	0.00	0.98	0.00
C52	1.00	0.00	0.00	0.00	0.19	0.80	0.00	0.00	0.00	1.00
C53	1.00	0.00	0.00	0.00	0.19	0.81	0.00	0.00	0.00	0.99
C54	1.00	0.00	0.08	0.00	0.92	0.00	0.00	0.00	0.99	0.00
C55	1.00	0.00	0.14	0.00	0.86	0.00	0.00	0.00	0.99	0.00
C56	1.00	0.01	0.11	0.00	0.88	0.00	0.00	0.00	0.98	0.00
C57	1.00	0.01	0.00	0.00	0.18	0.82	0.00	0.00	0.00	0.54
C58	1.00	0.01	0.12	0.00	0.87	0.00	0.00	0.00	0.94	0.00
C59	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	1.00	0.00
C60	1.00	0.00	0.00	0.00	0.05	0.95	0.00	0.00	0.00	0.99
C61	1.00	0.05	0.01	0.00	0.01	0.93	0.00	0.00	0.09	0.00
C7	1.00	0.00	0.01	0.00	0.98	0.01	0.00	0.00	0.00	0.03
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.97
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
CW-1	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.00	0.30
CW-2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.90
CW-3	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.92
CW-4	1.00	0.01	0.00	0.00	0.28	0.72	0.00	0.00	0.00	0.37
CW-5	1.00	0.00	0.01	0.00	0.27	0.72	0.00	0.00	0.00	0.70
CW-6	1.00	0.00	0.01	0.00	0.71	0.28	0.00	0.00	0.00	0.70
DI4	1.00	0.00	0.10	0.00	0.90	0.00	0.00	0.00	0.95	0.00

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Conduit Surcharge Summary
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	Hours Full			Hours Above Full	Hours Capacity
Conduit	Both Ends	Upstream	Dnstream	Normal Flow	Limited
C31	0.01	0.11	0.01	0.01	0.01
C52	0.01	0.09	0.01	0.01	0.01
C53	0.01	0.11	0.01	0.01	0.01
C57	0.01	0.14	0.01	0.01	0.01

Analysis begun on: Wed Sep 22 15:32:55 2021
Analysis ended on: Wed Sep 22 15:33:01 2021
Total elapsed time: 00:00:06

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EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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WARNING 03: negative offset ignored for Link C37
WARNING 03: negative offset ignored for Link CW-1
WARNING 02: maximum depth increased for Node J29
WARNING 02: maximum depth increased for Node J30

*************
Element Count
*************
Number of rain gages ...... 7
Number of subcatchments ... 113
Number of nodes ........... 80
Number of links ........... 63
Number of pollutants ...... 0
Number of land uses ....... 0


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Raingage Summary
****************
                                                  Data       Recording
Name                 Data Source                  Type       Interval
----------------------------------------------------------------------
100Year_12Hour_AES(Bloor,TRCA) 100Year_12Hour_AES(Bloor,TRCA) INTENSITY   15 min.
100Year_6Hour_AES(Bloor,TRCA) 100Year_6Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_12Hour_AES(Bloor,TRCA) 10Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
10Year_6Hour_AES(Bloor,TRCA) 10Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.
25mm-4hr-Chicago     25mm-4h-Chicago              INTENSITY   10 min.
50Year_12Hour_AES(Bloor,TRCA) 50Year_12Hour_AES(Bloor,TRCA)  INTENSITY   15 min.
50Year_6Hour_AES(Bloor,TRCA) 50Year_6Hour_AES(Bloor,TRCA)   INTENSITY   15 min.


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Subcatchment Summary
********************
Name                         Area     Width   %Imperv    %Slope Rain Gage            Outlet
-------------------------------------------------------------------------------------------------
D1                           0.30     13.33      1.00    0.3500 25mm-4hr-Chicago     J1
D10                          0.28      9.82      1.00    1.8000 25mm-4hr-Chicago     Outlet2_1
D11                          0.11      9.56      1.00    1.0000 25mm-4hr-Chicago     Outlet2_5
D12                          0.64     15.02      1.00    1.2000 25mm-4hr-Chicago     Outlet2_2
D13                          0.11      5.79      1.00    1.6000 25mm-4hr-Chicago     Outlet2_4
D15                          0.07      6.36      1.00    1.0000 25mm-4hr-Chicago     J48
D16                          0.24     15.48      1.00    0.7000 25mm-4hr-Chicago     J6
D17                          0.14     16.87      1.00    1.4000 25mm-4hr-Chicago     J23
D2                           0.02      6.37      1.00    0.7700 25mm-4hr-Chicago     J18
D2_1                         0.05      6.20      1.00    0.7700 25mm-4hr-Chicago     J18
D20                          0.07      6.67      1.00    0.3500 25mm-4hr-Chicago     J3
D21                          0.07      6.36      1.00    1.5000 25mm-4hr-Chicago     J61
D22                          0.08      7.62      1.00    0.7000 25mm-4hr-Chicago     J3
D23                          0.05      4.17      1.00    0.4000 25mm-4hr-Chicago     J61
D24                          0.21      5.47      1.00    4.4200 25mm-4hr-Chicago     J43
D25                          0.21      7.00      1.00    4.0000 25mm-4hr-Chicago     Outlet5_2
D27                          0.02      4.44      1.00    6.0000 25mm-4hr-Chicago     Outlet6-2
D28                          0.01      4.54      1.00    3.7000 25mm-4hr-Chicago     J39
D29                          0.05      3.13      1.00    7.0000 25mm-4hr-Chicago     J33
D3                           0.07      6.36      1.00    1.0000 25mm-4hr-Chicago     J19
D4                           0.06     11.54      1.00    0.4000 25mm-4hr-Chicago     J9
D40                          0.03      9.09      1.00    2.0000 25mm-4hr-Chicago     Outlet5_1
D41                          0.01      4.35      1.00    2.0000 25mm-4hr-Chicago     J25
D5                           0.08      5.00      1.00    1.0000 25mm-4hr-Chicago     J16
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D6	0.05	6.25	1.00	0.5000	25mm-4hr-Chicago	J7
D7	0.10	6.25	1.00	1.3000	25mm-4hr-Chicago	J30
D8	0.09	5.63	1.00	1.5000	25mm-4hr-Chicago	J22
D9	0.14	4.38	1.00	2.0000	25mm-4hr-Chicago	J27
EXT1	1.08	83.08	7.00	1.5000	25mm-4hr-Chicago	J1
EXT10	0.54	28.42	7.00	16.0000	25mm-4hr-Chicago	J14
EXT2	0.64	42.67	7.00	1.8000	25mm-4hr-Chicago	J11
EXT3	0.45	34.62	7.00	0.5000	25mm-4hr-Chicago	J11
EXT4	0.10	18.18	7.00	3.0000	25mm-4hr-Chicago	J10
EXT5	0.24	10.91	7.00	0.3500	25mm-4hr-Chicago	J31
EXT6	0.26	15.76	7.00	1.3000	25mm-4hr-Chicago	J34
EXT7	0.82	34.17	7.00	0.2000	25mm-4hr-Chicago	J34
EXT8	0.60	46.15	7.00	0.2000	25mm-4hr-Chicago	J35
EXT9	2.59	92.50	7.00	7.3000	25mm-4hr-Chicago	J49
G	0.05	5.00	1.00	0.5000	25mm-4hr-Chicago	J31
G1	0.03	2.03	1.00	1.0000	25mm-4hr-Chicago	J15
G10	0.02	13.33	1.00	1.0000	25mm-4hr-Chicago	Outlet3
G2	0.03	1.86	1.00	1.0000	25mm-4hr-Chicago	J21
G3	0.07	2.09	1.00	1.7000	25mm-4hr-Chicago	J22
G4	0.02	4.44	1.00	1.3000	25mm-4hr-Chicago	Outlet2_5
G5	0.04	5.88	1.00	1.3000	25mm-4hr-Chicago	Outlet2_5
G6	0.05	2.63	1.00	1.2000	25mm-4hr-Chicago	J4
G7	0.04	3.33	1.00	1.2000	25mm-4hr-Chicago	J2
G8	0.03	3.61	1.00	0.7000	25mm-4hr-Chicago	J26
P1	0.05	3.13	95.00	1.3400	25mm-4hr-Chicago	J21
R1	0.06	7.50	95.00	0.3000	25mm-4hr-Chicago	J1
R10	0.04	5.33	95.00	1.0000	25mm-4hr-Chicago	J15
R12	0.02	10.99	95.00	1.0000	25mm-4hr-Chicago	J15
R13_14	0.08	5.00	95.00	1.0000	25mm-4hr-Chicago	J21
R15	0.07	4.38	95.00	1.0000	25mm-4hr-Chicago	J21
R16	0.04	11.98	95.00	1.0000	25mm-4hr-Chicago	J22
R17_1	0.03	4.69	95.00	2.0000	25mm-4hr-Chicago	J22
R17_2	0.10	4.76	95.00	1.7000	25mm-4hr-Chicago	J31
R18	0.13	4.56	25.00	1.7000	25mm-4hr-Chicago	J22
R19	0.18	4.22	95.00	1.2000	25mm-4hr-Chicago	J34
R2	0.05	6.25	95.00	0.3000	25mm-4hr-Chicago	J18
R20	0.13	4.35	95.00	1.2000	25mm-4hr-Chicago	J4
R22	0.07	4.67	95.00	1.2000	25mm-4hr-Chicago	J34
R23_25	0.07	4.66	95.00	0.7000	25mm-4hr-Chicago	J35
R24	0.07	4.52	95.00	0.7000	25mm-4hr-Chicago	J35
R26	0.04	38.46	95.00	1.0000	25mm-4hr-Chicago	J6
R26_2	0.02	19.23	95.00	1.0000	25mm-4hr-Chicago	Outlet3
R27	0.03	19.48	95.00	1.0000	25mm-4hr-Chicago	J42
R28	0.02	14.29	95.00	1.0000	25mm-4hr-Chicago	Outlet3
R29	0.03	5.36	95.00	0.5000	25mm-4hr-Chicago	J42
R3	0.09	6.82	95.00	0.6000	25mm-4hr-Chicago	J10
R30	0.02	3.57	95.00	0.5000	25mm-4hr-Chicago	J45
R31	0.02	3.57	95.00	0.3500	25mm-4hr-Chicago	J45
R32	0.02	3.57	95.00	0.3500	25mm-4hr-Chicago	J42
R33	0.04	4.00	95.00	0.5000	25mm-4hr-Chicago	J46
R34	0.04	4.00	95.00	0.5000	25mm-4hr-Chicago	J41
R35_2	0.02	6.87	95.00	0.5000	25mm-4hr-Chicago	OF1
R36	0.11	4.07	95.00	3.5000	25mm-4hr-Chicago	J44
R37	0.13	5.66	95.00	3.5000	25mm-4hr-Chicago	J50
R38	0.03	6.00	95.00	3.5000	25mm-4hr-Chicago	J60
R39	0.14	5.00	90.00	7.0000	25mm-4hr-Chicago	J13
R39_1	0.04	5.97	90.00	6.0000	25mm-4hr-Chicago	J59
R4	0.07	5.30	95.00	0.6000	25mm-4hr-Chicago	J10
R40_2	0.09	5.08	90.00	7.0000	25mm-4hr-Chicago	Outlet6-1
R40_3	0.03	4.48	90.00	6.0000	25mm-4hr-Chicago	J59
R40_4	0.07	6.36	90.00	7.0000	25mm-4hr-Chicago	J14
R41_1	0.04	5.33	90.00	3.8000	25mm-4hr-Chicago	OF3
R41_2	0.03	5.00	90.00	2.0000	25mm-4hr-Chicago	J37
R41_4	0.12	5.46	90.00	5.7000	25mm-4hr-Chicago	J49

R41_5	0.05	5.00	90.00	6.0000	25mm-4hr-Chicago	J40
R42_1	0.04	5.33	90.00	3.8000	25mm-4hr-Chicago	OF3
R42_3	0.08	5.00	90.00	3.2500	25mm-4hr-Chicago	J29
R42_4	0.11	5.00	90.00	7.0000	25mm-4hr-Chicago	J28
R6	0.02	7.55	95.00	1.0000	25mm-4hr-Chicago	J9
R7	0.02	6.90	95.00	1.0000	25mm-4hr-Chicago	OF2
R8	0.04	6.67	95.00	1.3000	25mm-4hr-Chicago	J8
R9	0.08	5.93	95.00	1.1000	25mm-4hr-Chicago	J15
S1	0.08	4.44	1.00	7.0000	25mm-4hr-Chicago	J29
S3	0.05	3.13	95.00	0.9000	25mm-4hr-Chicago	J26
S4	0.07	4.67	1.00	3.0000	25mm-4hr-Chicago	Outlet6-1
SW1_1	0.01	3.26	95.00	1.0000	25mm-4hr-Chicago	J18
SW10	0.04	3.33	95.00	1.2000	25mm-4hr-Chicago	J2
SW12	0.04	3.64	95.00	0.5000	25mm-4hr-Chicago	J45
SW13	0.03	2.50	95.00	0.5000	25mm-4hr-Chicago	J46
SW17	0.04	3.33	95.00	1.2800	25mm-4hr-Chicago	Outlet2_5
SW2	0.02	2.63	95.00	1.0000	25mm-4hr-Chicago	J19
SW20	0.02	2.50	95.00	1.1500	25mm-4hr-Chicago	J5
SW21	0.05	3.13	95.00	1.5000	25mm-4hr-Chicago	J24
SW3	0.03	3.11	95.00	1.0000	25mm-4hr-Chicago	J17
SW5	0.04	2.71	95.00	1.0000	25mm-4hr-Chicago	J15
SW6	0.05	3.09	95.00	1.0000	25mm-4hr-Chicago	J21
SW7	0.09	2.69	95.00	1.7000	25mm-4hr-Chicago	J22
SW8	0.08	3.16	95.00	1.7000	25mm-4hr-Chicago	J31
SW9	0.06	3.16	95.00	1.2000	25mm-4hr-Chicago	J4

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
DICB1	JUNCTION	259.42	1.50	0.0	
J1	JUNCTION	260.21	1.50	0.0	
J10	JUNCTION	262.80	0.70	0.0	
J11	JUNCTION	262.28	0.70	0.0	
J12	JUNCTION	257.12	0.90	0.0	
J13	JUNCTION	249.99	0.70	0.0	
J14	JUNCTION	231.59	0.70	0.0	
J15	JUNCTION	264.09	0.50	0.0	
J17	JUNCTION	263.22	0.90	0.0	
J18	JUNCTION	261.56	0.90	0.0	
J19	JUNCTION	262.06	0.90	0.0	
J2	JUNCTION	262.68	0.50	0.0	
J20	JUNCTION	261.97	0.90	0.0	
J21	JUNCTION	264.06	0.50	0.0	
J22	JUNCTION	262.52	0.50	0.0	
J23	JUNCTION	260.55	0.90	0.0	
J24	JUNCTION	264.60	0.90	0.0	
J25	JUNCTION	249.62	0.90	0.0	
J26	JUNCTION	262.66	0.50	0.0	
J27	JUNCTION	257.66	0.50	0.0	
J28	JUNCTION	244.24	0.30	0.0	
J29	JUNCTION	231.05	0.90	0.0	
J3	JUNCTION	261.63	0.60	0.0	
J30	JUNCTION	262.74	0.45	0.0	
J31	JUNCTION	262.25	0.70	0.0	
J32	JUNCTION	257.45	0.50	0.0	
J33	JUNCTION	231.15	0.70	0.0	
J34	JUNCTION	261.90	0.70	0.0	
J35	JUNCTION	261.97	0.50	0.0	
J36	JUNCTION	232.08	0.70	0.0	
J37	JUNCTION	231.00	0.70	0.0	

J38	JUNCTION	230.93	0.70	0.0
J39	JUNCTION	230.19	0.70	0.0
J4	JUNCTION	260.94	0.50	0.0
J40	JUNCTION	229.41	0.70	0.0
J41	JUNCTION	262.00	0.90	0.0
J42	JUNCTION	261.74	0.50	0.0
J43	JUNCTION	257.37	0.90	0.0
J44	JUNCTION	262.00	0.90	0.0
J45	JUNCTION	261.82	0.50	0.0
J46	JUNCTION	262.13	0.90	0.0
J47	JUNCTION	260.50	0.50	0.0
J48	JUNCTION	261.73	0.50	0.0
J49	JUNCTION	241.06	0.70	0.0
J5	JUNCTION	264.15	0.70	0.0
J50	JUNCTION	260.76	0.60	0.0
J51	JUNCTION	239.73	0.70	0.0
J54	JUNCTION	236.80	0.70	0.0
J55	JUNCTION	235.75	0.70	0.0
J56	JUNCTION	234.13	0.70	0.0
J57	JUNCTION	233.21	0.70	0.0
J58	JUNCTION	231.74	0.70	0.0
J59	JUNCTION	230.65	0.70	0.0
J6	JUNCTION	260.83	0.90	0.0
J60	JUNCTION	250.16	0.90	0.0
J61	JUNCTION	261.50	0.60	0.0
J62	JUNCTION	228.45	0.70	0.0
J63	JUNCTION	227.47	0.70	0.0
J7	JUNCTION	263.45	0.70	0.0
J8	JUNCTION	263.37	0.90	0.0
J82	JUNCTION	261.20	0.90	0.0
J9	JUNCTION	262.95	0.90	0.0
STM-MH-EX	JUNCTION	258.42	4.38	0.0
J16	OUTFALL	263.13	0.50	0.0
OF1	OUTFALL	0.00	0.00	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	0.00	0.00	0.0
OF4	OUTFALL	225.00	0.70	0.0
Outlet1	OUTFALL	258.06	1.00	0.0
Outlet2_1	OUTFALL	256.93	0.70	0.0
Outlet2_2	OUTFALL	257.00	0.70	0.0
Outlet2_3	OUTFALL	257.31	0.45	0.0
Outlet2_4	OUTFALL	256.50	0.50	0.0
Outlet2_5	OUTFALL	0.00	0.00	0.0
Outlet3	OUTFALL	260.20	0.61	0.0
Outlet4	OUTFALL	261.10	0.50	0.0
Outlet5_1	OUTFALL	249.70	0.90	0.0
Outlet5_2	OUTFALL	250.23	0.60	0.0
Outlet6-1	OUTFALL	226.62	0.90	0.0
Outlet6-2	OUTFALL	226.86	0.70	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J18	J82	CONDUIT	21.9	1.6441	0.0130
C10	J14	J59	CONDUIT	9.8	9.6363	0.0130
C11	J10	J11	CONDUIT	40.5	1.2853	0.0270
C12	J11	J1	CONDUIT	131.5	1.5743	0.0270
C13	J25	Outlet5_1	CONDUIT	5.1	-1.5688	0.0270
C14	J28	J29	CONDUIT	185.3	7.1363	0.0270
C15	J15	J16	CONDUIT	145.3	0.6607	0.0270
C16	J17	J19	CONDUIT	97.3	1.1892	0.0270

C17	J19	J20	CONDUIT	10.0	0.9400	0.0130
C18	J20	J18	CONDUIT	60.7	0.6738	0.0270
C19	J21	J22	CONDUIT	137.6	1.1193	0.0270
C2	J23	J47	CONDUIT	11.4	0.4398	0.0130
C20	J22	J27	CONDUIT	224.2	2.1682	0.0270
C21	J24	J30	CONDUIT	143.1	1.2997	0.0270
C22	J29	Outlet6-1	CONDUIT	145.0	3.0566	0.0270
C23	J4	Outlet2_4	CONDUIT	249.7	1.7784	0.0270
C24	J27	J32	CONDUIT	35.5	0.5916	0.0270
C25	J32	Outlet2_3	CONDUIT	24.8	0.5645	0.0130
C26	J30	J31	CONDUIT	27.6	1.7756	0.0130
C27	J31	Outlet2_1	CONDUIT	264.6	2.0110	0.0270
C28	J34	Outlet2_2	CONDUIT	420.5	1.1654	0.0270
C29	J35	J6	CONDUIT	140.6	0.8108	0.0270
C3	J9	J10	CONDUIT	37.8	0.3968	0.0130
C30	J26	J23	CONDUIT	142.9	1.4764	0.0270
C31	J49	J51	CONDUIT	12.0	11.1520	0.0130
C32	J42	J3	CONDUIT	60.0	0.1833	0.0270
C33	J41	J3	CONDUIT	105.4	0.3510	0.0270
C34	J44	J43	CONDUIT	156.9	2.9554	0.0270
C35	J46	J61	CONDUIT	109.9	0.5733	0.0270
C36	J45	J61	CONDUIT	61.3	0.5220	0.0270
C37	J82	DICB1	CONDUIT	43.8	4.0673	0.0270
C4	J2	J48	CONDUIT	109.6	0.8668	0.0270
C40	J61	Outlet4	CONDUIT	2.1	19.4029	0.0270
C41	J43	J12	CONDUIT	7.1	3.4528	0.0240
C42	J47	Outlet3	CONDUIT	5.1	3.6918	0.0250
C43	J37	J38	CONDUIT	11.0	0.6364	0.0130
C44	J12	J60	CONDUIT	108.7	6.4161	0.0270
C45	J50	Outlet5_2	CONDUIT	268.0	3.9316	0.0270
C48	J39	J40	CONDUIT	9.5	8.2383	0.0130
C49	J38	J39	CONDUIT	19.5	3.7976	0.0270
C5	J13	J14	CONDUIT	239.1	7.7174	0.0270
C50	J40	Outlet6-2	CONDUIT	47.4	5.3875	0.0270
C51	DICB1	STM-MH-EX	CONDUIT	3.0	35.3553	0.0130
C52	J54	J55	CONDUIT	11.5	9.1687	0.0130
C53	J56	J57	CONDUIT	14.8	6.2283	0.0130
C54	J51	J54	CONDUIT	34.7	8.4667	0.0270
C55	J55	J56	CONDUIT	25.4	6.3884	0.0270
C56	J57	J36	CONDUIT	29.3	3.8608	0.0270
C57	J36	J58	CONDUIT	10.0	3.4020	0.0130
C58	J58	J33	CONDUIT	20.1	2.9337	0.0270
C59	J59	J62	CONDUIT	21.4	10.3254	0.0270
C60	J62	J63	CONDUIT	12.3	7.9929	0.0130
C61	J63	OF4	CONDUIT	18.1	13.7443	0.0270
C7	J7	J8	CONDUIT	18.9	0.4233	0.0240
C8	J60	J25	CONDUIT	27.3	1.9784	0.0130
C9	J8	J9	CONDUIT	44.1	0.9524	0.0270
CW-1	J1	STM-MH-EX	CONDUIT	80.0	2.2381	0.0240
CW-2	STM-MH-EX	Outlet1	CONDUIT	41.1	0.8759	0.0130
CW-3	J6	J23	CONDUIT	39.4	0.7103	0.0130
CW-4	J3	J61	CONDUIT	15.3	0.8475	0.0130
CW-5	J33	J29	CONDUIT	14.6	0.6849	0.0130
CW-6	J48	J4	CONDUIT	44.2	1.7876	0.0130
DI4	J5	J7	CONDUIT	71.7	0.9763	0.0270

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	0.45	0.16	0.11	0.45	1	0.37

C10	CIRCULAR	0.45	0.16	0.11	0.45	1	0.89
C11	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.95
C12	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	5.47
C13	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	9.70
C14	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	1.91
C15	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.69
C16	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	8.45
C17	CIRCULAR	0.45	0.16	0.11	0.45	1	0.28
C18	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	6.36
C19	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.20
C2	CIRCULAR	0.38	0.11	0.09	0.38	1	0.12
C20	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	3.06
C21	TRAPEZOIDAL	0.30	0.57	0.20	2.80	1	0.81
C22	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.54
C23	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.77
C24	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	1.20
C25	CIRCULAR	0.45	0.16	0.11	0.45	1	0.21
C26	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
C27	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	6.19
C28	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.71
C29	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.87
C3	CIRCULAR	0.45	0.16	0.11	0.45	1	0.18
C30	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	2.52
C31	CIRCULAR	0.45	0.16	0.11	0.45	1	0.95
C32	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	0.89
C33	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.23
C34	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	13.32
C35	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.57
C36	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.50
C37	Ditch3	0.38	0.88	0.22	3.75	1	2.42
C4	TRAPEZOIDAL	0.50	1.25	0.30	4.00	1	1.93
C40	TRAPEZOIDAL	0.50	1.00	0.27	3.50	1	6.87
C41	CIRCULAR	0.45	0.16	0.11	0.45	1	0.29
C42	TRAPEZOIDAL	0.50	0.75	0.27	2.50	1	2.43
C43	CIRCULAR	0.45	0.16	0.11	0.45	1	0.23
C44	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	19.62
C45	TRAPEZOIDAL	0.60	1.68	0.35	4.60	1	6.13
C48	CIRCULAR	0.45	0.16	0.11	0.45	1	0.82
C49	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.50
C5	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.12
C50	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	10.13
C51	CIRCULAR	0.30	0.07	0.07	0.30	1	0.58
C52	CIRCULAR	0.45	0.16	0.11	0.45	1	0.86
C53	CIRCULAR	0.45	0.16	0.11	0.45	1	0.71
C54	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	12.69
C55	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	11.03
C56	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	8.57
C57	CIRCULAR	0.45	0.16	0.11	0.45	1	0.53
C58	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	7.47
C59	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	14.02
C60	CIRCULAR	0.45	0.16	0.11	0.45	1	0.81
C61	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	16.17
C7	CIRCULAR	0.45	0.16	0.11	0.45	1	0.10
C8	CIRCULAR	0.45	0.16	0.11	0.45	1	0.40
C9	TRAPEZOIDAL	0.90	3.33	0.50	6.40	1	7.56
CW-1	CIRCULAR	1.20	1.13	0.30	1.20	1	3.16
CW-2	RECT_CLOSED	1.00	0.92	0.24	0.92	1	2.54
CW-3	CIRCULAR	0.60	0.28	0.15	0.60	1	0.52
CW-4	CIRCULAR	0.45	0.16	0.11	0.45	1	0.26
CW-5	CIRCULAR	0.60	0.28	0.15	0.60	1	0.51
CW-6	CIRCULAR	0.45	0.16	0.11	0.45	1	0.38
DI4	TRAPEZOIDAL	0.70	2.17	0.40	5.20	1	4.31

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Transect Summary
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Transect Ditch1
Area:
            0.0016     0.0062     0.0123     0.0191     0.0265
            0.0346     0.0432     0.0525     0.0625     0.0730
            0.0842     0.0960     0.1084     0.1214     0.1351
            0.1494     0.1643     0.1798     0.1960     0.2128
            0.2302     0.2482     0.2669     0.2862     0.3061
            0.3266     0.3478     0.3696     0.3920     0.4150
            0.4387     0.4630     0.4879     0.5134     0.5396
            0.5664     0.5937     0.6217     0.6503     0.6795
            0.7093     0.7397     0.7708     0.8024     0.8346
            0.8671     0.8999     0.9329     0.9663     1.0000
Hrad:
            0.0180     0.0387     0.0679     0.0957     0.1216
            0.1462     0.1697     0.1924     0.2143     0.2357
            0.2566     0.2770     0.2972     0.3170     0.3366
            0.3559     0.3751     0.3941     0.4129     0.4316
            0.4502     0.4687     0.4871     0.5054     0.5236
            0.5418     0.5598     0.5779     0.5958     0.6137
            0.6316     0.6495     0.6672     0.6850     0.7028
            0.7209     0.7389     0.7569     0.7749     0.7928
            0.8107     0.8286     0.8464     0.8642     0.8868
            0.9131     0.9392     0.9652     0.9910     1.0000
Width:
            0.0915     0.1662     0.1887     0.2069     0.2250
            0.2432     0.2614     0.2796     0.2978     0.3159
            0.3341     0.3523     0.3705     0.3887     0.4068
            0.4250     0.4432     0.4614     0.4796     0.4978
            0.5159     0.5341     0.5523     0.5705     0.5887
            0.6068     0.6250     0.6432     0.6614     0.6796
            0.6977     0.7159     0.7341     0.7523     0.7703
            0.7881     0.8058     0.8234     0.8411     0.8587
            0.8763     0.8940     0.9116     0.9292     0.9417
            0.9501     0.9584     0.9668     0.9752     1.0000

Transect Ditch2
Area:
            0.0008     0.0045     0.0092     0.0145     0.0205
            0.0272     0.0346     0.0426     0.0513     0.0607
            0.0708     0.0815     0.0929     0.1050     0.1177
            0.1311     0.1452     0.1599     0.1754     0.1914
            0.2082     0.2256     0.2436     0.2622     0.2816
            0.3015     0.3221     0.3434     0.3653     0.3879
            0.4113     0.4355     0.4606     0.4864     0.5132
            0.5407     0.5691     0.5983     0.6284     0.6592
            0.6909     0.7232     0.7564     0.7903     0.8246
            0.8592     0.8940     0.9291     0.9644     1.0000
Hrad:
            0.0150     0.0373     0.0659     0.0920     0.1163
            0.1393     0.1614     0.1828     0.2037     0.2242
            0.2443     0.2641     0.2837     0.3031     0.3224
            0.3415     0.3604     0.3793     0.3981     0.4168
            0.4365     0.4556     0.4746     0.4934     0.5122
            0.5309     0.5496     0.5682     0.5867     0.6024
            0.6165     0.6308     0.6454     0.6603     0.6752
            0.6904     0.7057     0.7212     0.7368     0.7536
            0.7711     0.7886     0.8062     0.8250     0.8546
            0.8840     0.9133     0.9423     0.9712     1.0000
Width:
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0.0567	0.1218	0.1406	0.1594	0.1782
0.1970	0.2158	0.2346	0.2534	0.2722
0.2911	0.3099	0.3287	0.3475	0.3663
0.3851	0.4039	0.4227	0.4415	0.4603
0.4778	0.4958	0.5139	0.5321	0.5502
0.5683	0.5864	0.6046	0.6227	0.6441
0.6674	0.6906	0.7139	0.7372	0.7605
0.7837	0.8070	0.8303	0.8536	0.8755
0.8967	0.9179	0.9390	0.9587	0.9656
0.9725	0.9794	0.9862	0.9931	1.0000

Transect Ditch3
Area:

0.0017	0.0053	0.0108	0.0182	0.0266
0.0355	0.0451	0.0551	0.0657	0.0769
0.0886	0.1009	0.1137	0.1271	0.1410
0.1555	0.1705	0.1861	0.2023	0.2190
0.2363	0.2542	0.2730	0.2925	0.3128
0.3339	0.3557	0.3784	0.4018	0.4260
0.4509	0.4766	0.5030	0.5296	0.5566
0.5838	0.6114	0.6393	0.6675	0.6960
0.7249	0.7542	0.7837	0.8136	0.8438
0.8744	0.9053	0.9365	0.9681	1.0000

Hrad:

0.0212	0.0392	0.0565	0.0753	0.1029
0.1291	0.1542	0.1783	0.2016	0.2243
0.2464	0.2680	0.2891	0.3098	0.3302
0.3502	0.3699	0.3894	0.4087	0.4277
0.4466	0.4605	0.4741	0.4879	0.5019
0.5162	0.5308	0.5457	0.5607	0.5758
0.5910	0.6063	0.6291	0.6537	0.6780
0.7017	0.7244	0.7468	0.7690	0.7910
0.8127	0.8343	0.8556	0.8767	0.8977
0.9185	0.9391	0.9596	0.9799	1.0000

Width:

0.0839	0.1424	0.2010	0.2532	0.2705
0.2877	0.3050	0.3222	0.3395	0.3567
0.3740	0.3912	0.4085	0.4257	0.4430
0.4604	0.4779	0.4953	0.5128	0.5302
0.5477	0.5716	0.5962	0.6207	0.6453
0.6698	0.6940	0.7181	0.7421	0.7662
0.7902	0.8143	0.8267	0.8356	0.8446
0.8540	0.8645	0.8749	0.8853	0.8957
0.9062	0.9166	0.9270	0.9374	0.9479
0.9583	0.9687	0.9791	0.9896	1.0000

Transect Ditch4
Area:

0.0026	0.0072	0.0124	0.0184	0.0251
0.0324	0.0405	0.0493	0.0588	0.0690
0.0799	0.0915	0.1038	0.1168	0.1305
0.1448	0.1599	0.1757	0.1923	0.2095
0.2276	0.2464	0.2658	0.2858	0.3064
0.3275	0.3493	0.3716	0.3945	0.4180
0.4421	0.4667	0.4920	0.5178	0.5442
0.5712	0.5988	0.6270	0.6558	0.6852
0.7152	0.7458	0.7768	0.8080	0.8395
0.8711	0.9030	0.9351	0.9675	1.0000

Hrad:

0.0209	0.0491	0.0744	0.0976	0.1194
0.1402	0.1603	0.1798	0.1988	0.2175
0.2359	0.2542	0.2723	0.2903	0.3080
0.3257	0.3431	0.3597	0.3762	0.3927
0.4092	0.4258	0.4455	0.4650	0.4843

```
            0.5034     0.5223     0.5411     0.5598     0.5783
            0.5967     0.6150     0.6332     0.6512     0.6687
            0.6862     0.7036     0.7210     0.7383     0.7556
            0.7728     0.7909     0.8176     0.8441     0.8705
            0.8967     0.9227     0.9486     0.9744     1.0000
Width:
            0.1288     0.1504     0.1719     0.1935     0.2151
            0.2367     0.2582     0.2798     0.3014     0.3229
            0.3445     0.3658     0.3871     0.4084     0.4297
            0.4510     0.4725     0.4952     0.5180     0.5407
            0.5635     0.5860     0.6038     0.6216     0.6393
            0.6571     0.6748     0.6926     0.7103     0.7281
            0.7458     0.7636     0.7813     0.7992     0.8176
            0.8361     0.8545     0.8729     0.8913     0.9098
            0.9282     0.9456     0.9524     0.9592     0.9660
            0.9728     0.9796     0.9864     0.9932     1.0000

Transect Ditch5
Area:
            0.0007     0.0027     0.0060     0.0106     0.0163
            0.0229     0.0301     0.0381     0.0466     0.0559
            0.0659     0.0765     0.0878     0.0997     0.1124
            0.1257     0.1397     0.1544     0.1697     0.1857
            0.2024     0.2197     0.2376     0.2562     0.2755
            0.2954     0.3159     0.3371     0.3590     0.3815
            0.4047     0.4285     0.4531     0.4785     0.5048
            0.5319     0.5599     0.5888     0.6185     0.6492
            0.6806     0.7129     0.7461     0.7802     0.8151
            0.8509     0.8873     0.9242     0.9618     1.0000
Hrad:
            0.0195     0.0390     0.0592     0.0796     0.1021
            0.1289     0.1543     0.1787     0.2023     0.2252
            0.2476     0.2696     0.2913     0.3127     0.3338
            0.3548     0.3756     0.3962     0.4171     0.4381
            0.4588     0.4794     0.4999     0.5204     0.5407
            0.5609     0.5811     0.6012     0.6212     0.6412
            0.6611     0.6810     0.6956     0.7103     0.7252
            0.7405     0.7559     0.7716     0.7875     0.8036
            0.8199     0.8363     0.8528     0.8693     0.8859
            0.9067     0.9302     0.9536     0.9769     1.0000
Width:
            0.0348     0.0695     0.1028     0.1344     0.1618
            0.1794     0.1969     0.2145     0.2321     0.2496
            0.2672     0.2847     0.3023     0.3198     0.3374
            0.3549     0.3725     0.3901     0.4071     0.4240
            0.4410     0.4579     0.4749     0.4918     0.5087
            0.5257     0.5426     0.5596     0.5765     0.5935
            0.6104     0.6274     0.6495     0.6719     0.6943
            0.7167     0.7391     0.7616     0.7840     0.8064
            0.8288     0.8512     0.8737     0.8963     0.9190
            0.9375     0.9531     0.9687     0.9844     1.0000

Transect Ditch6
Area:
            0.0027     0.0089     0.0159     0.0235     0.0319
            0.0409     0.0507     0.0612     0.0724     0.0843
            0.0970     0.1103     0.1243     0.1391     0.1546
            0.1707     0.1873     0.2044     0.2220     0.2401
            0.2587     0.2777     0.2973     0.3173     0.3378
            0.3588     0.3802     0.4022     0.4246     0.4476
            0.4710     0.4949     0.5194     0.5442     0.5693
            0.5946     0.6203     0.6464     0.6731     0.7002
            0.7278     0.7558     0.7843     0.8133     0.8428
            0.8727     0.9033     0.9347     0.9670     1.0000
```

Hrad:

0.0161	0.0463	0.0740	0.0997	0.1239
0.1470	0.1691	0.1906	0.2114	0.2317
0.2517	0.2713	0.2906	0.3097	0.3285
0.3505	0.3732	0.3956	0.4177	0.4394
0.4608	0.4820	0.5030	0.5237	0.5442
0.5645	0.5846	0.6046	0.6244	0.6441
0.6636	0.6830	0.7014	0.7275	0.7534
0.7775	0.7967	0.8158	0.8348	0.8537
0.8726	0.8914	0.9101	0.9288	0.9474
0.9639	0.9723	0.9811	0.9904	1.0000

Width:

0.1730	0.1966	0.2179	0.2392	0.2605
0.2818	0.3031	0.3244	0.3457	0.3670
0.3883	0.4096	0.4309	0.4522	0.4735
0.4898	0.5043	0.5188	0.5333	0.5478
0.5624	0.5769	0.5914	0.6059	0.6204
0.6349	0.6494	0.6639	0.6785	0.6930
0.7075	0.7220	0.7380	0.7453	0.7527
0.7617	0.7757	0.7897	0.8037	0.8177
0.8317	0.8457	0.8597	0.8737	0.8877
0.9037	0.9278	0.9519	0.9759	1.0000

Transect Ditch7

Area:

0.0009	0.0049	0.0096	0.0151	0.0213
0.0283	0.0359	0.0443	0.0534	0.0632
0.0737	0.0850	0.0969	0.1096	0.1230
0.1371	0.1520	0.1675	0.1838	0.2008
0.2186	0.2370	0.2562	0.2761	0.2967
0.3180	0.3401	0.3629	0.3864	0.4106
0.4356	0.4612	0.4876	0.5147	0.5425
0.5706	0.5991	0.6279	0.6570	0.6865
0.7163	0.7465	0.7770	0.8078	0.8389
0.8704	0.9023	0.9344	0.9669	1.0000

Hrad:

0.0174	0.0403	0.0685	0.0941	0.1179
0.1405	0.1623	0.1834	0.2040	0.2242
0.2440	0.2636	0.2830	0.3023	0.3213
0.3402	0.3590	0.3777	0.3963	0.4148
0.4333	0.4517	0.4701	0.4885	0.5068
0.5251	0.5433	0.5615	0.5797	0.5979
0.6160	0.6345	0.6535	0.6724	0.6906
0.7152	0.7396	0.7636	0.7873	0.8108
0.8339	0.8568	0.8794	0.9018	0.9239
0.9459	0.9676	0.9891	1.0104	1.0000

Width:

0.0725	0.1294	0.1505	0.1715	0.1925
0.2136	0.2346	0.2557	0.2767	0.2978
0.3188	0.3399	0.3609	0.3820	0.4030
0.4241	0.4453	0.4665	0.4876	0.5088
0.5299	0.5511	0.5722	0.5934	0.6145
0.6357	0.6568	0.6780	0.6991	0.7203
0.7414	0.7622	0.7821	0.8066	0.8194
0.8292	0.8390	0.8488	0.8586	0.8684
0.8782	0.8880	0.8978	0.9076	0.9174
0.9272	0.9370	0.9468	0.9566	1.0000

Transect Ditch8

Area:

0.0023	0.0092	0.0192	0.0298	0.0409
0.0525	0.0644	0.0768	0.0896	0.1029
0.1167	0.1310	0.1458	0.1610	0.1768
0.1930	0.2097	0.2270	0.2446	0.2628

0.2815 0.3007 0.3203 0.3405 0.3611
0.3821 0.4035 0.4253 0.4474 0.4699
0.4928 0.5161 0.5397 0.5638 0.5882
0.6130 0.6382 0.6638 0.6897 0.7161
0.7428 0.7699 0.7974 0.8253 0.8536
0.8822 0.9112 0.9405 0.9700 1.0000

Hrad:

0.0160 0.0324 0.0596 0.0874 0.1138
0.1406 0.1664 0.1915 0.2146 0.2370
0.2588 0.2801 0.3009 0.3213 0.3414
0.3611 0.3805 0.3996 0.4184 0.4370
0.4554 0.4737 0.4917 0.5095 0.5272
0.5492 0.5707 0.5911 0.6114 0.6315
0.6514 0.6712 0.6908 0.7104 0.7298
0.7491 0.7682 0.7873 0.8062 0.8251
0.8439 0.8625 0.8811 0.8996 0.9181
0.9366 0.9575 0.9783 0.9989 1.0000

Width:

0.1514 0.2983 0.3357 0.3537 0.3718
0.3847 0.3977 0.4107 0.4264 0.4423
0.4582 0.4742 0.4901 0.5061 0.5220
0.5379 0.5539 0.5698 0.5858 0.6017
0.6177 0.6336 0.6495 0.6655 0.6814
0.6923 0.7036 0.7161 0.7286 0.7411
0.7536 0.7662 0.7787 0.7912 0.8037
0.8163 0.8288 0.8413 0.8538 0.8663
0.8789 0.8914 0.9039 0.9164 0.9290
0.9413 0.9509 0.9605 0.9701 1.0000

Transect Ditch9

Area:

0.0017 0.0045 0.0080 0.0123 0.0173
0.0231 0.0296 0.0368 0.0448 0.0535
0.0630 0.0732 0.0841 0.0958 0.1082
0.1214 0.1353 0.1500 0.1654 0.1815
0.1984 0.2160 0.2344 0.2536 0.2735
0.2942 0.3156 0.3378 0.3607 0.3844
0.4089 0.4341 0.4602 0.4870 0.5149
0.5434 0.5723 0.6017 0.6316 0.6620
0.6928 0.7241 0.7559 0.7881 0.8208
0.8540 0.8877 0.9218 0.9587 1.0000

Hrad:

0.0322 0.0651 0.0937 0.1202 0.1454
0.1697 0.1936 0.2171 0.2403 0.2633
0.2862 0.3089 0.3316 0.3541 0.3766
0.3991 0.4215 0.4438 0.4660 0.4881
0.5101 0.5321 0.5542 0.5762 0.5983
0.6202 0.6420 0.6638 0.6857 0.7075
0.7294 0.7509 0.7721 0.7934 0.8088
0.8401 0.8712 0.9020 0.9326 0.9627
0.9925 1.0221 1.0515 1.0807 1.1098
1.1386 1.1673 1.1829 1.1056 1.0000

Width:

0.0535 0.0698 0.0862 0.1025 0.1188
0.1352 0.1515 0.1678 0.1842 0.2005
0.2169 0.2332 0.2495 0.2659 0.2822
0.2986 0.3149 0.3312 0.3477 0.3643
0.3809 0.3975 0.4141 0.4307 0.4473
0.4640 0.4808 0.4976 0.5144 0.5313
0.5481 0.5653 0.5827 0.6002 0.6234
0.6336 0.6438 0.6540 0.6641 0.6745
0.6849 0.6953 0.7057 0.7162 0.7266
0.7370 0.7474 0.7668 0.8596 1.0000

```
*******************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*******************************************************

***************
Analysis Options
***************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 11/23/2020 00:00:00
Ending Date .............. 11/24/2020 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:00:05
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 5.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m


**************************        Volume         Depth
Runoff Quantity Continuity     hectare-m            mm
**************************     ---------       -------
Total Precipitation ......         0.369        24.997
Evaporation Loss .........         0.000         0.000
Infiltration Loss ........         0.256        17.303
Surface Runoff ...........         0.095         6.439
Final Storage ............         0.019         1.291
Continuity Error (%) .....        -0.143


**************************        Volume        Volume
Flow Routing Continuity        hectare-m      10^6 ltr
**************************     ---------     ---------
Dry Weather Inflow .......         0.000         0.000
Wet Weather Inflow .......         0.095         0.951
Groundwater Inflow .......         0.000         0.000
RDII Inflow ..............         0.000         0.000
External Inflow ..........         0.000         0.000
External Outflow .........         0.095         0.951
Flooding Loss ............         0.000         0.000
Evaporation Loss .........         0.000         0.000
Exfiltration Loss ........         0.000         0.000
Initial Stored Volume ....         0.000         0.000
Final Stored Volume ......         0.000         0.001
Continuity Error (%) .....        -0.066


************************
```

```
Highest Continuity Errors
*************************
Node J25 (1.94%)
Node J7 (1.25%)


***************************
Time-Step Critical Elements
***************************
Link C40 (33.40%)
Link C51 (30.59%)


*******************************
Highest Flow Instability Indexes
*******************************
Link C13 (9)
Link C61 (6)
Link C25 (3)
Link C60 (2)
Link C31 (2)


*************************
Routing Time Step Summary
*************************
Minimum Time Step           :     0.74 sec
Average Time Step           :     3.40 sec
Maximum Time Step           :     5.00 sec
Percent in Steady State     :    -0.00
Average Iterations per Step :     2.00
Percent Not Converging      :     0.00
Time Step Frequencies       :
    5.000 -  3.155 sec      :    54.07 %
    3.155 -  1.991 sec      :    17.78 %
    1.991 -  1.256 sec      :    18.72 %
    1.256 -  0.792 sec      :     9.43 %
    0.792 -  0.500 sec      :     0.00 %


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

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff mm	Tota Runo 10^6 l
D1	25.00	0.00	0.00	23.42	0.24	0.11	0.34	0.0
D10	25.00	0.00	0.00	23.33	0.24	0.18	0.41	0.0
D11	25.00	0.00	0.00	23.23	0.24	0.30	0.53	0.0
D12	25.00	0.00	0.00	23.42	0.24	0.10	0.34	0.0
D13	25.00	0.00	0.00	23.33	0.24	0.24	0.47	0.0
D15	25.00	0.00	0.00	23.23	0.24	0.31	0.54	0.0
D16	25.00	0.00	0.00	23.33	0.24	0.20	0.44	0.0
D17	25.00	0.00	0.00	23.14	0.24	0.43	0.66	0.0
D2	25.00	0.00	0.00	22.86	0.24	0.66	0.89	0.0
D2_1	25.00	0.00	0.00	23.14	0.24	0.35	0.59	0.0
D20	25.00	0.00	0.00	23.33	0.24	0.21	0.44	0.0
D21	25.00	0.00	0.00	23.14	0.24	0.36	0.59	0.0
D22	25.00	0.00	0.00	23.23	0.24	0.28	0.51	0.0
D23	25.00	0.00	0.00	23.33	0.24	0.20	0.43	0.0
D24	25.00	0.00	0.00	23.33	0.24	0.20	0.44	0.0

D25	25.00	0.00	0.00	23.33	0.24	0.24	0.48	0.0
D27	25.00	0.00	0.00	22.67	0.24	0.91	1.14	0.0
D28	25.00	0.00	0.00	22.48	0.24	1.08	1.32	0.0
D29	25.00	0.00	0.00	23.04	0.24	0.48	0.71	0.0
D3	25.00	0.00	0.00	23.23	0.24	0.31	0.54	0.0
D4	25.00	0.00	0.00	23.14	0.24	0.38	0.62	0.0
D40	25.00	0.00	0.00	22.76	0.24	0.82	1.05	0.0
D41	25.00	0.00	0.00	22.57	0.24	0.95	1.19	0.0
D5	25.00	0.00	0.00	23.33	0.24	0.23	0.46	0.0
D6	25.00	0.00	0.00	23.23	0.24	0.30	0.54	0.0
D7	25.00	0.00	0.00	23.33	0.24	0.25	0.49	0.0
D8	25.00	0.00	0.00	23.23	0.24	0.27	0.50	0.0
D9	25.00	0.00	0.00	23.33	0.24	0.17	0.40	0.0
EXT1	25.00	0.00	0.00	21.82	1.65	0.31	1.96	0.0
EXT10	25.00	0.00	0.00	21.56	1.65	0.54	2.19	0.0
EXT2	25.00	0.00	0.00	21.82	1.65	0.30	1.95	0.0
EXT3	25.00	0.00	0.00	21.91	1.65	0.20	1.85	0.0
EXT4	25.00	0.00	0.00	21.47	1.65	0.68	2.33	0.0
EXT5	25.00	0.00	0.00	22.00	1.66	0.11	1.76	0.0
EXT6	25.00	0.00	0.00	21.82	1.65	0.24	1.90	0.0
EXT7	25.00	0.00	0.00	22.00	1.66	0.08	1.73	0.0
EXT8	25.00	0.00	0.00	22.00	1.66	0.13	1.79	0.0
EXT9	25.00	0.00	0.00	21.82	1.65	0.32	1.97	0.0
G	25.00	0.00	0.00	23.33	0.24	0.25	0.49	0.0
G1	25.00	0.00	0.00	23.33	0.24	0.24	0.48	0.0
G10	25.00	0.00	0.00	22.57	0.24	0.98	1.22	0.0
G2	25.00	0.00	0.00	23.33	0.24	0.23	0.46	0.0
G3	25.00	0.00	0.00	23.42	0.24	0.15	0.39	0.0
G4	25.00	0.00	0.00	22.95	0.24	0.62	0.86	0.0
G5	25.00	0.00	0.00	23.04	0.24	0.48	0.72	0.0
G6	25.00	0.00	0.00	23.33	0.24	0.21	0.45	0.0
G7	25.00	0.00	0.00	23.23	0.24	0.31	0.54	0.0
G8	25.00	0.00	0.00	23.23	0.24	0.33	0.57	0.0
P1	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R1	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R10	25.00	0.00	0.00	0.79	22.48	0.40	22.88	0.0
R12	25.00	0.00	0.00	0.78	22.48	0.41	22.89	0.0
R13_14	25.00	0.00	0.00	0.80	22.43	0.39	22.82	0.0
R15	25.00	0.00	0.00	0.80	22.43	0.39	22.82	0.0
R16	25.00	0.00	0.00	0.78	22.50	0.41	22.91	0.0
R17_1	25.00	0.00	0.00	0.78	22.50	0.41	22.90	0.0
R17_2	25.00	0.00	0.00	0.80	22.43	0.39	22.82	0.0
R18	25.00	0.00	0.00	13.90	5.92	3.91	9.83	0.0
R19	25.00	0.00	0.00	0.82	22.36	0.37	22.73	0.0
R2	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R20	25.00	0.00	0.00	0.81	22.39	0.38	22.77	0.0
R22	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R23_25	25.00	0.00	0.00	0.80	22.42	0.39	22.81	0.0
R24	25.00	0.00	0.00	0.80	22.42	0.39	22.81	0.0
R26	25.00	0.00	0.00	0.78	22.44	0.42	22.86	0.0
R26_2	25.00	0.00	0.00	0.78	22.44	0.42	22.86	0.0
R27	25.00	0.00	0.00	0.78	22.46	0.42	22.88	0.0
R28	25.00	0.00	0.00	0.78	22.46	0.42	22.88	0.0
R29	25.00	0.00	0.00	0.79	22.48	0.40	22.88	0.0
R3	25.00	0.00	0.00	0.80	22.43	0.39	22.81	0.0
R30	25.00	0.00	0.00	0.79	22.48	0.40	22.88	0.0
R31	25.00	0.00	0.00	0.79	22.47	0.40	22.86	0.0
R32	25.00	0.00	0.00	0.79	22.47	0.40	22.86	0.0
R33	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R34	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R35_2	25.00	0.00	0.00	0.78	22.50	0.41	22.91	0.0
R36	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
R37	25.00	0.00	0.00	0.80	22.45	0.39	22.84	0.0
R38	25.00	0.00	0.00	0.78	22.50	0.41	22.91	0.0

R39	25.00	0.00	0.00	1.61	21.28	0.77	22.05	0.0
R39_1	25.00	0.00	0.00	1.57	21.31	0.81	22.12	0.0
R4	25.00	0.00	0.00	0.80	22.43	0.39	22.81	0.0
R40_2	25.00	0.00	0.00	1.59	21.30	0.78	22.09	0.0
R40_3	25.00	0.00	0.00	1.57	21.31	0.81	22.12	0.0
R40_4	25.00	0.00	0.00	1.58	21.32	0.80	22.11	0.0
R41_1	25.00	0.00	0.00	1.58	21.32	0.80	22.11	0.0
R41_2	25.00	0.00	0.00	1.58	21.32	0.80	22.11	0.0
R41_4	25.00	0.00	0.00	1.61	21.29	0.77	22.06	0.0
R41_5	25.00	0.00	0.00	1.58	21.32	0.80	22.11	0.0
R42_1	25.00	0.00	0.00	1.58	21.32	0.80	22.11	0.0
R42_3	25.00	0.00	0.00	1.60	21.29	0.77	22.06	0.0
R42_4	25.00	0.00	0.00	1.60	21.29	0.78	22.07	0.0
R6	25.00	0.00	0.00	0.78	22.49	0.41	22.91	0.0
R7	25.00	0.00	0.00	0.78	22.50	0.41	22.91	0.0
R8	25.00	0.00	0.00	0.79	22.49	0.40	22.90	0.0
R9	25.00	0.00	0.00	0.80	22.45	0.39	22.84	0.0
S1	25.00	0.00	0.00	23.14	0.24	0.44	0.67	0.0
S3	25.00	0.00	0.00	1.00	22.43	0.19	22.62	0.0
S4	25.00	0.00	0.00	23.14	0.24	0.37	0.60	0.0
SW1_1	25.00	0.00	0.00	0.78	22.50	0.41	22.91	0.0
SW10	25.00	0.00	0.00	0.79	22.46	0.39	22.85	0.0
SW12	25.00	0.00	0.00	0.80	22.43	0.39	22.82	0.0
SW13	25.00	0.00	0.00	0.80	22.43	0.39	22.81	0.0
SW17	25.00	0.00	0.00	0.79	22.46	0.40	22.85	0.0
SW2	25.00	0.00	0.00	0.79	22.48	0.40	22.88	0.0
SW20	25.00	0.00	0.00	0.79	22.48	0.40	22.88	0.0
SW21	25.00	0.00	0.00	0.80	22.44	0.39	22.84	0.0
SW3	25.00	0.00	0.00	0.79	22.46	0.40	22.86	0.0
SW5	25.00	0.00	0.00	0.80	22.44	0.39	22.83	0.0
SW6	25.00	0.00	0.00	0.80	22.43	0.39	22.82	0.0
SW7	25.00	0.00	0.00	0.81	22.40	0.38	22.78	0.0
SW8	25.00	0.00	0.00	0.80	22.42	0.39	22.80	0.0
SW9	25.00	0.00	0.00	0.80	22.43	0.39	22.81	0.0

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Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
DICB1	JUNCTION	0.00	0.02	259.44	0 01:39	0.02
J1	JUNCTION	0.02	0.14	260.35	0 01:33	0.14
J10	JUNCTION	0.01	0.04	262.84	0 01:31	0.04
J11	JUNCTION	0.01	0.05	262.33	0 01:31	0.05
J12	JUNCTION	0.00	0.01	257.13	0 01:44	0.01
J13	JUNCTION	0.00	0.02	250.01	0 01:31	0.02
J14	JUNCTION	0.02	0.10	231.69	0 01:34	0.10
J15	JUNCTION	0.01	0.06	264.15	0 01:31	0.06
J17	JUNCTION	0.00	0.01	263.23	0 01:31	0.01
J18	JUNCTION	0.02	0.08	261.64	0 01:38	0.08
J19	JUNCTION	0.01	0.06	262.12	0 01:38	0.06
J2	JUNCTION	0.00	0.02	262.70	0 01:31	0.02
J20	JUNCTION	0.00	0.02	261.98	0 01:41	0.02
J21	JUNCTION	0.01	0.05	264.11	0 01:31	0.05
J22	JUNCTION	0.01	0.05	262.57	0 01:32	0.05
J23	JUNCTION	0.03	0.10	260.65	0 01:42	0.10
J24	JUNCTION	0.00	0.02	264.62	0 01:31	0.02
J25	JUNCTION	0.08	0.10	249.72	0 01:54	0.10
J26	JUNCTION	0.00	0.02	262.68	0 01:32	0.02

J27	JUNCTION	0.02	0.09	257.75	0	01:37	0.09
J28	JUNCTION	0.00	0.02	244.26	0	01:30	0.02
J29	JUNCTION	0.01	0.05	231.10	0	01:33	0.05
J3	JUNCTION	0.02	0.08	261.71	0	01:41	0.08
J30	JUNCTION	0.01	0.05	262.79	0	01:47	0.05
J31	JUNCTION	0.01	0.03	262.28	0	01:32	0.03
J32	JUNCTION	0.03	0.14	257.59	0	01:39	0.14
J33	JUNCTION	0.03	0.14	231.29	0	01:32	0.14
J34	JUNCTION	0.01	0.05	261.95	0	01:33	0.05
J35	JUNCTION	0.01	0.04	262.01	0	01:31	0.04
J36	JUNCTION	0.02	0.15	232.23	0	01:32	0.15
J37	JUNCTION	0.01	0.06	231.06	0	01:30	0.06
J38	JUNCTION	0.00	0.01	230.94	0	01:30	0.01
J39	JUNCTION	0.01	0.04	230.23	0	01:30	0.04
J4	JUNCTION	0.01	0.03	260.97	0	01:33	0.03
J40	JUNCTION	0.00	0.02	229.43	0	01:30	0.02
J41	JUNCTION	0.00	0.02	262.02	0	01:32	0.02
J42	JUNCTION	0.01	0.05	261.79	0	01:30	0.05
J43	JUNCTION	0.02	0.08	257.44	0	01:42	0.08
J44	JUNCTION	0.00	0.02	262.02	0	01:31	0.02
J45	JUNCTION	0.00	0.04	261.86	0	01:30	0.04
J46	JUNCTION	0.00	0.03	262.16	0	01:31	0.03
J47	JUNCTION	0.01	0.04	260.54	0	01:42	0.04
J48	JUNCTION	0.01	0.04	261.77	0	01:44	0.04
J49	JUNCTION	0.02	0.15	241.21	0	01:30	0.15
J5	JUNCTION	0.00	0.01	264.16	0	01:30	0.01
J50	JUNCTION	0.00	0.02	260.78	0	01:31	0.02
J51	JUNCTION	0.00	0.03	239.76	0	01:30	0.03
J54	JUNCTION	0.02	0.15	236.95	0	01:30	0.15
J55	JUNCTION	0.00	0.04	235.79	0	01:30	0.04
J56	JUNCTION	0.02	0.15	234.28	0	01:31	0.15
J57	JUNCTION	0.00	0.04	233.25	0	01:31	0.04
J58	JUNCTION	0.01	0.04	231.78	0	01:32	0.04
J59	JUNCTION	0.00	0.02	230.67	0	01:32	0.02
J6	JUNCTION	0.02	0.11	260.94	0	01:32	0.11
J60	JUNCTION	0.02	0.08	250.24	0	01:53	0.08
J61	JUNCTION	0.00	0.03	261.53	0	01:34	0.03
J62	JUNCTION	0.02	0.11	228.56	0	01:33	0.11
J63	JUNCTION	0.00	0.02	227.49	0	01:33	0.02
J7	JUNCTION	0.01	0.04	263.49	0	01:46	0.04
J8	JUNCTION	0.00	0.02	263.39	0	01:30	0.02
J82	JUNCTION	0.01	0.03	261.23	0	01:39	0.03
J9	JUNCTION	0.02	0.08	263.03	0	01:31	0.08
STM-MH-EX	JUNCTION	0.01	0.09	258.51	0	01:34	0.09
J16	OUTFALL	0.00	0.03	263.16	0	01:31	0.03
OF1	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF4	OUTFALL	0.00	0.02	225.02	0	01:33	0.02
Outlet1	OUTFALL	0.01	0.05	258.11	0	01:34	0.05
Outlet2_1	OUTFALL	0.00	0.03	256.96	0	01:32	0.03
Outlet2_2	OUTFALL	0.01	0.04	257.04	0	01:33	0.04
Outlet2_3	OUTFALL	0.02	0.12	257.43	0	01:39	0.12
Outlet2_4	OUTFALL	0.00	0.03	256.53	0	01:33	0.03
Outlet2_5	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
Outlet3	OUTFALL	0.00	0.00	260.20	0	00:00	0.00
Outlet4	OUTFALL	0.00	0.03	261.13	0	01:34	0.03
Outlet5_1	OUTFALL	0.00	0.01	249.71	0	01:54	0.01
Outlet5_2	OUTFALL	0.00	0.02	250.25	0	01:31	0.02
Outlet6-1	OUTFALL	0.01	0.05	226.67	0	01:33	0.05
Outlet6-2	OUTFALL	0.00	0.02	226.88	0	01:30	0.02

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days	hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
DICB1	JUNCTION	0.000	0.006	0	01:39	0	0.026	0.026
J1	JUNCTION	0.017	0.047	0	01:30	0.0359	0.115	0.067
J10	JUNCTION	0.018	0.025	0	01:31	0.0388	0.0577	-0.020
J11	JUNCTION	0.011	0.033	0	01:30	0.0208	0.0785	-0.146
J12	JUNCTION	0.000	0.006	0	01:42	0	0.026	-0.019
J13	JUNCTION	0.016	0.016	0	01:30	0.0309	0.0309	-0.348
J14	JUNCTION	0.014	0.028	0	01:30	0.0273	0.0583	0.147
J15	JUNCTION	0.021	0.021	0	01:30	0.0413	0.0413	-0.009
J17	JUNCTION	0.004	0.004	0	01:30	0.00686	0.00686	-0.311
J18	JUNCTION	0.007	0.008	0	01:30	0.0142	0.026	-0.033
J19	JUNCTION	0.003	0.006	0	01:30	0.00495	0.0118	0.281
J2	JUNCTION	0.005	0.005	0	01:30	0.00936	0.00936	-0.340
J20	JUNCTION	0.000	0.003	0	01:38	0	0.0118	0.100
J21	JUNCTION	0.027	0.027	0	01:30	0.0572	0.0572	-0.052
J22	JUNCTION	0.022	0.046	0	01:30	0.05	0.107	-0.152
J23	JUNCTION	0.000	0.029	0	01:32	0.000931	0.0654	0.429
J24	JUNCTION	0.006	0.006	0	01:30	0.0114	0.0114	-0.390
J25	JUNCTION	0.000	0.006	0	01:53	0.000119	0.033	1.980
J26	JUNCTION	0.005	0.005	0	01:30	0.0115	0.0115	-0.753
J27	JUNCTION	0.000	0.040	0	01:32	0.000566	0.108	0.201
J28	JUNCTION	0.013	0.013	0	01:30	0.0243	0.0243	-0.132
J29	JUNCTION	0.009	0.055	0	01:31	0.0182	0.12	-0.023
J3	JUNCTION	0.000	0.013	0	01:30	0.00072	0.0283	0.670
J30	JUNCTION	0.000	0.005	0	01:31	0.000489	0.0119	0.546
J31	JUNCTION	0.021	0.021	0	01:30	0.0455	0.0574	-0.009
J32	JUNCTION	0.000	0.032	0	01:37	0	0.108	0.134
J33	JUNCTION	0.000	0.037	0	01:32	0.000355	0.0778	0.097
J34	JUNCTION	0.031	0.031	0	01:30	0.076	0.076	0.075
J35	JUNCTION	0.020	0.020	0	01:30	0.0427	0.0427	-0.351
J36	JUNCTION	0.000	0.038	0	01:31	0	0.0774	-0.058
J37	JUNCTION	0.004	0.004	0	01:30	0.00663	0.00663	-0.012
J38	JUNCTION	0.000	0.004	0	01:30	0	0.00663	0.005
J39	JUNCTION	0.000	0.004	0	01:30	0.000132	0.00676	0.052
J4	JUNCTION	0.018	0.018	0	01:30	0.0435	0.0532	0.001
J40	JUNCTION	0.006	0.010	0	01:30	0.0111	0.0178	-0.074
J41	JUNCTION	0.004	0.004	0	01:30	0.00913	0.00913	-0.557
J42	JUNCTION	0.010	0.010	0	01:30	0.0183	0.0183	-0.476
J43	JUNCTION	0.000	0.011	0	01:31	0.000921	0.0261	0.452
J44	JUNCTION	0.012	0.012	0	01:30	0.0251	0.0251	-0.344
J45	JUNCTION	0.009	0.009	0	01:30	0.0183	0.0183	-0.104
J46	JUNCTION	0.007	0.007	0	01:30	0.016	0.016	-0.093
J47	JUNCTION	0.000	0.015	0	01:42	0	0.0651	-0.016
J48	JUNCTION	0.000	0.004	0	01:31	0.00038	0.00977	0.525
J49	JUNCTION	0.039	0.039	0	01:30	0.0774	0.0774	-0.089
J5	JUNCTION	0.002	0.002	0	01:30	0.00457	0.00457	-0.323
J50	JUNCTION	0.015	0.015	0	01:30	0.0297	0.0297	-0.003
J51	JUNCTION	0.000	0.039	0	01:30	0	0.0775	0.062
J54	JUNCTION	0.000	0.039	0	01:30	0	0.0774	0.008
J55	JUNCTION	0.000	0.038	0	01:30	0	0.0774	0.007
J56	JUNCTION	0.000	0.038	0	01:30	0	0.0774	-0.047
J57	JUNCTION	0.000	0.038	0	01:31	0	0.0775	0.047
J58	JUNCTION	0.000	0.037	0	01:32	0	0.0775	0.072
J59	JUNCTION	0.009	0.024	0	01:31	0.0155	0.0737	0.069
J6	JUNCTION	0.006	0.023	0	01:30	0.0102	0.053	0.214
J60	JUNCTION	0.004	0.006	0	01:41	0.00687	0.0329	0.009

J61	JUNCTION	0.000	0.020	0	01:32	0.000632	0.063	0.051
J62	JUNCTION	0.000	0.023	0	01:32	0	0.0736	-0.143
J63	JUNCTION	0.000	0.022	0	01:33	0	0.0737	-0.845
J7	JUNCTION	0.000	0.002	0	01:30	0.000268	0.00486	1.261
J8	JUNCTION	0.005	0.006	0	01:30	0.00915	0.014	-0.109
J82	JUNCTION	0.000	0.006	0	01:38	0	0.026	-0.005
J9	JUNCTION	0.003	0.008	0	01:30	0.00495	0.0189	0.223
STM-MH-EX	JUNCTION	0.000	0.047	0	01:47	0	0.14	0.044
J16	OUTFALL	0.000	0.018	0	01:31	0.00037	0.0416	0.000
OF1	OUTFALL	0.003	0.003	0	01:30	0.00458	0.00458	0.000
OF2	OUTFALL	0.003	0.003	0	01:30	0.00458	0.00458	0.000
OF3	OUTFALL	0.010	0.010	0	01:30	0.0177	0.0177	0.000
OF4	OUTFALL	0.000	0.022	0	01:33	0	0.0743	0.000
Outlet1	OUTFALL	0.000	0.042	0	01:34	0	0.14	0.000
Outlet2_1	OUTFALL	0.000	0.019	0	01:32	0.00116	0.0586	0.000
Outlet2_2	OUTFALL	0.001	0.023	0	01:33	0.00217	0.0781	0.000
Outlet2_3	OUTFALL	0.000	0.032	0	01:39	0	0.108	0.000
Outlet2_4	OUTFALL	0.000	0.016	0	01:33	0.000522	0.0537	0.000
Outlet2_5	OUTFALL	0.005	0.005	0	01:30	0.0102	0.0102	0.000
Outlet3	OUTFALL	0.005	0.016	0	01:40	0.00939	0.0745	0.000
Outlet4	OUTFALL	0.000	0.019	0	01:34	0	0.063	0.000
Outlet5_1	OUTFALL	0.000	0.006	0	01:54	0.000316	0.0327	0.000
Outlet5_2	OUTFALL	0.000	0.013	0	01:31	0.000998	0.0307	0.000
Outlet6-1	OUTFALL	0.011	0.059	0	01:33	0.0203	0.141	0.000
Outlet6-2	OUTFALL	0.000	0.010	0	01:30	0.000229	0.0181	0.000

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Node Surcharge Summary
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No nodes were surcharged.

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Node Flooding Summary
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No nodes were flooded.

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J16	46.23	0.003	0.018	0.042
OF1	31.97	0.000	0.003	0.005
OF2	31.81	0.000	0.003	0.005
OF3	35.17	0.002	0.010	0.018
OF4	57.60	0.004	0.022	0.074
Outlet1	63.74	0.007	0.042	0.140
Outlet2_1	55.47	0.003	0.019	0.059
Outlet2_2	59.72	0.004	0.023	0.078
Outlet2_3	61.18	0.005	0.032	0.108
Outlet2_4	55.29	0.003	0.016	0.054
Outlet2_5	36.52	0.001	0.005	0.010
Outlet3	63.87	0.003	0.016	0.074
Outlet4	56.82	0.003	0.019	0.063
Outlet5_1	60.42	0.001	0.006	0.033

Outlet5_2	43.90	0.002	0.013	0.031
Outlet6-1	53.28	0.008	0.059	0.141
Outlet6-2	36.78	0.002	0.010	0.018
System	49.99	0.052	0.285	0.951

****
Link Flow Summary
****

Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.006	0	01:38	0.55	0.02	0.12
C10	CONDUIT	0.018	0	01:34	1.55	0.02	0.13
C11	CONDUIT	0.023	0	01:31	0.45	0.00	0.06
C12	CONDUIT	0.031	0	01:31	0.28	0.01	0.13
C13	CONDUIT	0.006	0	01:54	0.08	0.00	0.06
C14	CONDUIT	0.012	0	01:30	0.37	0.01	0.12
C15	CONDUIT	0.018	0	01:31	0.37	0.01	0.09
C16	CONDUIT	0.003	0	01:31	0.10	0.00	0.04
C17	CONDUIT	0.003	0	01:38	0.50	0.01	0.08
C18	CONDUIT	0.003	0	01:41	0.05	0.00	0.05
C19	CONDUIT	0.025	0	01:31	0.46	0.01	0.10
C2	CONDUIT	0.015	0	01:42	1.11	0.13	0.18
C20	CONDUIT	0.040	0	01:32	0.54	0.01	0.14
C21	CONDUIT	0.005	0	01:31	0.21	0.01	0.09
C22	CONDUIT	0.052	0	01:33	0.84	0.00	0.06
C23	CONDUIT	0.016	0	01:33	0.48	0.01	0.06
C24	CONDUIT	0.032	0	01:37	0.33	0.03	0.23
C25	CONDUIT	0.032	0	01:39	0.85	0.15	0.29
C26	CONDUIT	0.002	0	01:47	0.52	0.01	0.08
C27	CONDUIT	0.018	0	01:32	0.52	0.00	0.05
C28	CONDUIT	0.023	0	01:33	0.49	0.00	0.06
C29	CONDUIT	0.018	0	01:31	0.21	0.01	0.15
C3	CONDUIT	0.009	0	01:31	0.66	0.05	0.14
C30	CONDUIT	0.004	0	01:32	0.11	0.00	0.11
C31	CONDUIT	0.039	0	01:30	1.71	0.04	0.20
C32	CONDUIT	0.010	0	01:30	0.18	0.01	0.11
C33	CONDUIT	0.004	0	01:32	0.07	0.00	0.10
C34	CONDUIT	0.011	0	01:31	0.28	0.00	0.05
C35	CONDUIT	0.007	0	01:32	0.24	0.00	0.05
C36	CONDUIT	0.009	0	01:31	0.26	0.01	0.06
C37	CHANNEL	0.006	0	01:39	0.52	0.00	0.07
C4	CONDUIT	0.004	0	01:31	0.18	0.00	0.06
C40	CONDUIT	0.019	0	01:34	1.29	0.00	0.05
C41	CONDUIT	0.006	0	01:42	1.09	0.02	0.10
C42	CONDUIT	0.015	0	01:42	0.75	0.01	0.07
C43	CONDUIT	0.004	0	01:30	0.59	0.02	0.08
C44	CONDUIT	0.006	0	01:44	0.12	0.00	0.05
C45	CONDUIT	0.013	0	01:31	0.55	0.00	0.04
C48	CONDUIT	0.004	0	01:30	0.87	0.00	0.06
C49	CONDUIT	0.004	0	01:30	0.14	0.00	0.04
C5	CONDUIT	0.014	0	01:31	0.25	0.00	0.08
C50	CONDUIT	0.010	0	01:30	0.55	0.00	0.02
C51	CONDUIT	0.006	0	01:39	0.94	0.01	0.19
C52	CONDUIT	0.038	0	01:30	1.65	0.04	0.20
C53	CONDUIT	0.038	0	01:31	1.54	0.05	0.21
C54	CONDUIT	0.039	0	01:30	0.36	0.00	0.13
C55	CONDUIT	0.038	0	01:30	0.33	0.00	0.13
C56	CONDUIT	0.038	0	01:31	0.31	0.00	0.14

C57	CONDUIT	0.037	0	01:32	1.47	0.07	0.22
C58	CONDUIT	0.037	0	01:32	0.32	0.00	0.13
C59	CONDUIT	0.023	0	01:32	0.32	0.00	0.09
C60	CONDUIT	0.022	0	01:33	1.56	0.03	0.15
C61	CONDUIT	0.022	0	01:33	1.00	0.00	0.03
C7	CONDUIT	0.001	0	01:42	0.20	0.01	0.06
C8	CONDUIT	0.006	0	01:53	0.25	0.01	0.19
C9	CONDUIT	0.005	0	01:30	0.10	0.00	0.06
CW-1	CONDUIT	0.042	0	01:29	1.08	0.01	0.10
CW-2	CONDUIT	0.042	0	01:34	0.64	0.02	0.07
CW-3	CONDUIT	0.024	0	01:32	0.87	0.05	0.18
CW-4	CONDUIT	0.006	0	01:41	0.59	0.02	0.12
CW-5	CONDUIT	0.037	0	01:32	1.32	0.07	0.16
CW-6	CONDUIT	0.002	0	01:44	0.48	0.01	0.08
DI4	CONDUIT	0.002	0	01:30	0.12	0.00	0.03

****
Flow Classification Summary
****

	Adjusted	Fraction of Time in Flow Class								
Conduit	/Actual Length	Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.87	0.13	0.00	0.00	0.00	0.79
C10	1.00	0.00	0.00	0.00	0.15	0.85	0.00	0.00	0.00	1.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98	0.00
C12	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C13	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.40	0.00
C14	1.00	0.00	0.11	0.00	0.88	0.01	0.00	0.00	0.97	0.00
C15	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.14	0.00
C16	1.00	0.00	0.11	0.00	0.89	0.00	0.00	0.00	1.00	0.00
C17	1.00	0.00	0.00	0.00	0.52	0.48	0.00	0.00	0.00	0.15
C18	1.00	0.00	0.11	0.00	0.89	0.00	0.00	0.00	0.98	0.00
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95	0.00
C2	1.00	0.00	0.00	0.00	0.40	0.60	0.00	0.00	0.00	0.28
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95	0.00
C21	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	0.95	0.00
C22	1.00	0.00	0.00	0.00	0.81	0.18	0.00	0.00	0.27	0.00
C23	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C24	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.96	0.00
C25	1.00	0.02	0.00	0.00	0.84	0.14	0.00	0.00	0.00	0.26
C26	1.00	0.00	0.00	0.00	0.75	0.25	0.00	0.00	0.00	0.53
C27	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C28	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C29	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.72	0.00
C3	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.00	0.17
C30	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.97	0.00
C31	1.00	0.00	0.00	0.00	0.41	0.59	0.00	0.00	0.00	1.00
C32	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
C34	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97	0.00
C35	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C36	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C37	1.00	0.01	0.00	0.00	0.12	0.87	0.00	0.00	0.16	0.00
C4	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.95	0.00
C40	1.00	0.01	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00
C41	1.00	0.00	0.00	0.00	0.37	0.63	0.00	0.00	0.00	0.13
C42	1.00	0.02	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00
C43	1.00	0.00	0.00	0.00	0.66	0.34	0.00	0.00	0.00	0.64
C44	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.97	0.00
C45	1.00	0.00	0.00	0.00	0.83	0.17	0.00	0.00	0.33	0.00

C48	1.00	0.00	0.00	0.00	0.55	0.45	0.00	0.00	0.00	0.99
C49	1.00	0.00	0.37	0.00	0.62	0.00	0.00	0.00	0.99	0.00
C5	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	1.00	0.00
C50	1.00	0.38	0.00	0.00	0.25	0.37	0.00	0.00	0.12	0.00
C51	1.00	0.00	0.01	0.00	0.21	0.78	0.00	0.00	0.98	0.00
C52	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.00	1.00
C53	1.00	0.00	0.00	0.00	0.35	0.64	0.00	0.00	0.00	0.99
C54	1.00	0.00	0.14	0.00	0.85	0.00	0.00	0.00	1.00	0.00
C55	1.00	0.00	0.24	0.00	0.76	0.00	0.00	0.00	0.99	0.00
C56	1.00	0.01	0.20	0.00	0.80	0.00	0.00	0.00	0.98	0.00
C57	1.00	0.01	0.00	0.00	0.33	0.67	0.00	0.00	0.00	0.28
C58	1.00	0.01	0.23	0.00	0.76	0.00	0.00	0.00	0.93	0.00
C59	1.00	0.00	0.13	0.00	0.87	0.00	0.00	0.00	1.00	0.00
C60	1.00	0.00	0.00	0.00	0.14	0.86	0.00	0.00	0.00	1.00
C61	1.00	0.14	0.01	0.00	0.01	0.84	0.00	0.00	0.20	0.00
C7	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.02
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.98
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
CW-1	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.00	0.13
CW-2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.57
CW-3	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00	0.95
CW-4	1.00	0.01	0.00	0.00	0.46	0.53	0.00	0.00	0.00	0.19
CW-5	1.00	0.00	0.01	0.00	0.62	0.37	0.00	0.00	0.00	0.63
CW-6	1.00	0.00	0.01	0.00	0.82	0.17	0.00	0.00	0.00	0.78
DI4	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.96	0.00

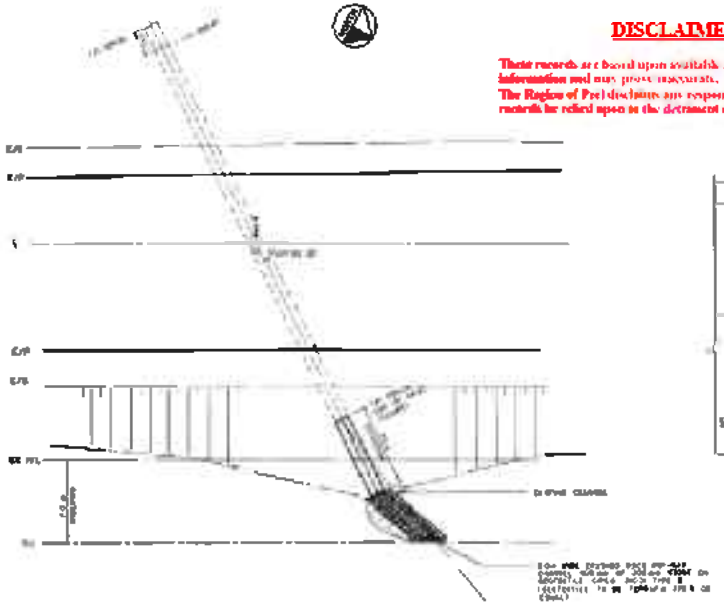
****
Conduit Surcharge Summary
****

No conduits were surcharged.

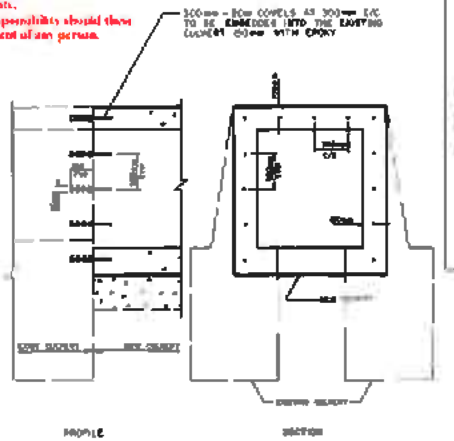
Analysis begun on: Wed Sep 22 22:27:32 2021
Analysis ended on: Wed Sep 22 22:27:35 2021
Total elapsed time: 00:00:03

APPENDIX H

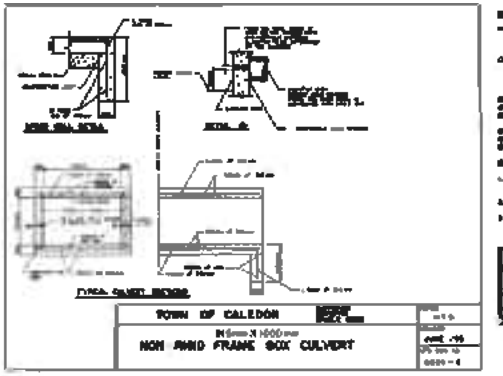
As-built Drawings and CCTV Report

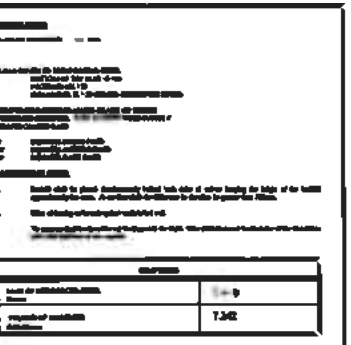


CULVERT PLAN



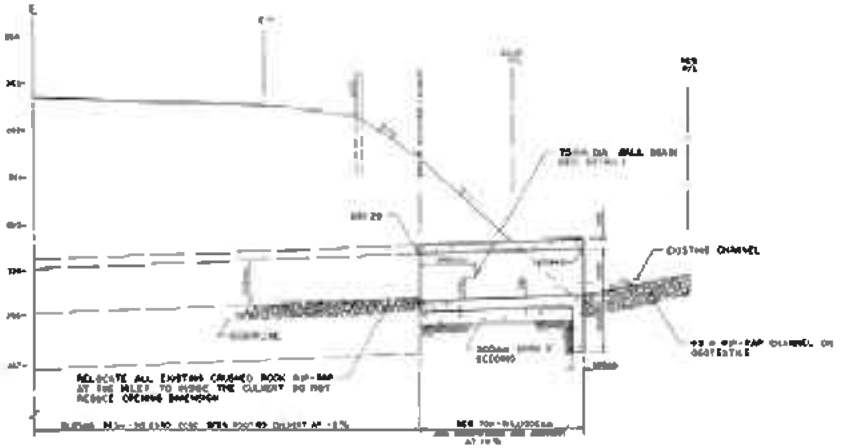
DOWELING DETAIL



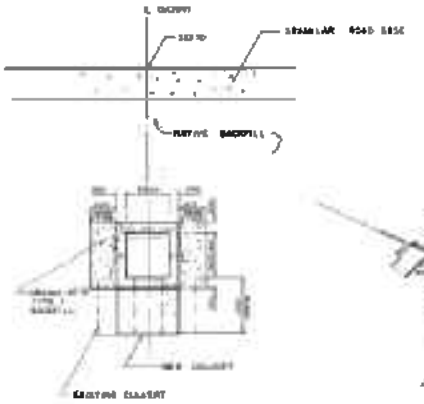


AS CONSTRUCTED PLANS
CONTRACTOR TOWN OF CALEDON
WORK COMMENCED OCT 5/98
WORK COMPLETED NOV 11/98
INSPECTOR Anthony Pellett

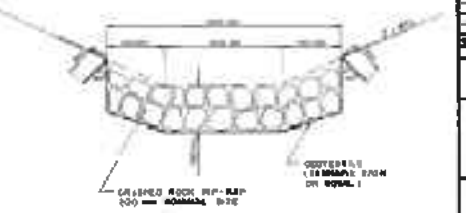
ISSUED FOR CONSTRUCTION



CULVERT PROFILE



CULVERT END SECTION



RIP-RAP CHANNEL CROSS-SECTION

THE CORPORATION OF THE
TOWN OF CALEDON
PUBLIC WORKS DEPARTMENT

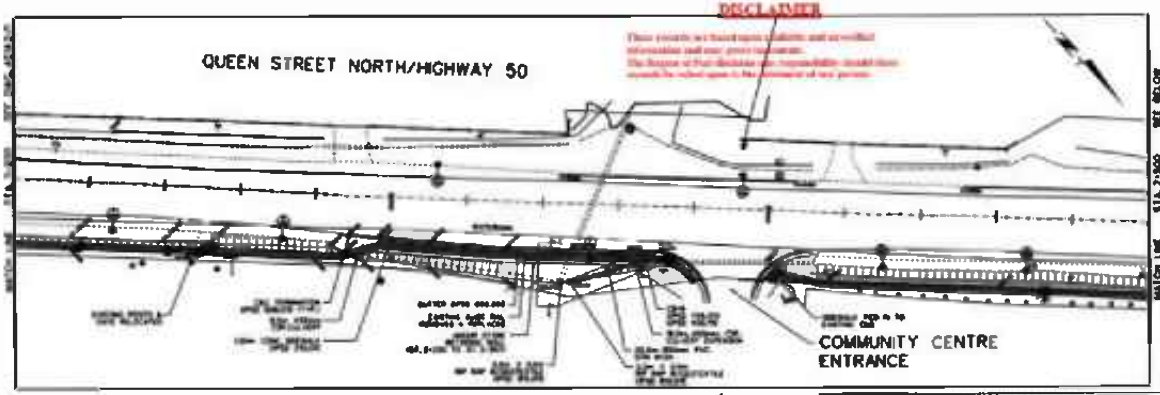
HIGHWAY #50 & COLUMBIA WAY
INTERSECTION IMPROVEMENT

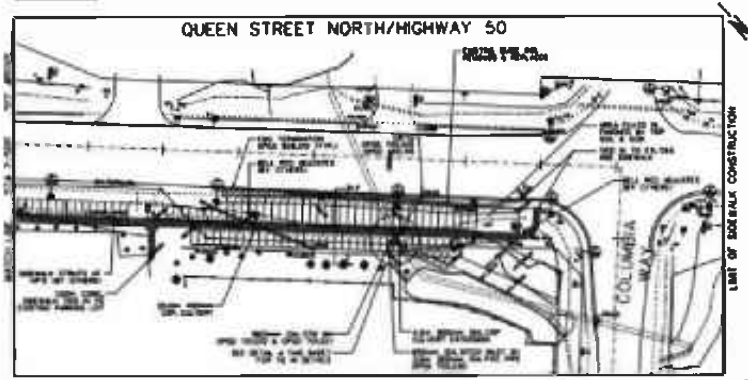
CULVERT EXTENSION DETAILS

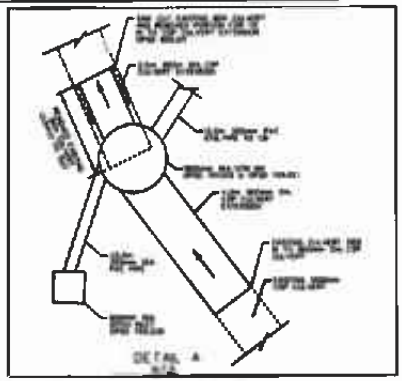
DRAWING NO.
4 OF 12

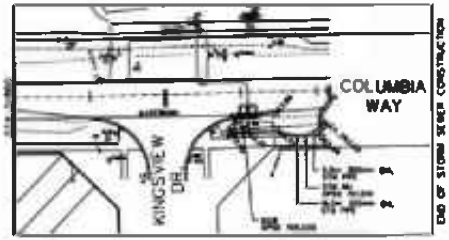
26407-D

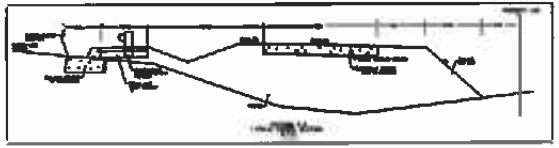
DISCLAIMER

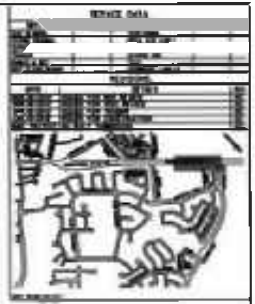












LEGEND

THIS DRAWING IS TO BE USED FOR SIDEWALK AND STORM SEWER CONSTRUCTION ONLY.

AECOM

NOTICE TO CONTRACTOR

Region of Peel
Working for you

QUEEN ST. N/HIGHWAY 50
PROP. 400mm WATERMAIN
SIDEWALK DESIGN
STA 2+200 TO STA 2+720

45144-D

WinCan

Section Profile

Project Name	Project Date
COLUMBIA WAY &HWY 50 CULVERT	**2020-12-08**

Secti No.	Upstream MH	Downstream MH	Date	Street	Media Label	Material	Total Length	Length Surveyed
1	INLET CULVERT	DISCHARGE POINT	2020-12-08	COLUMBIA WAY		Corrugated Metal Pipe	82.44	82.44

1 x Circular 900 = 82.44 Total Length (82.44 Length Surveyed)

Total: 1 = 82.44 Total Length (82.44 Length Surveyed)

WinCan

Section Summary

Project Name	Project Date
COLUMBIA WAY &HWY 50 CULVERT	**2020-12-08**

Number of sections	1
Total length of sewer network	82.44 m
Inspected length of sewer network	82.44 m
Not inspected length of sewer network	0.00 m
Total abandoned inspections	0
Number of section inspection photos	28
Number of section inspection videos	1
Number of section inspection scans	0
Number of section inclination measurements	0

Pipe Segment Reference	**INLET CULVERT-DISCHARGE**	Upstream MH	**INLET CULVERT**
City	**CALEDON**	Downstream MH	**DISCHARGE POINT**
Street	**COLUMBIA WAY**	Shape	**Circular 900mm**
Total Length	**82.4**	Material	**Corrugated Metal Pipe**

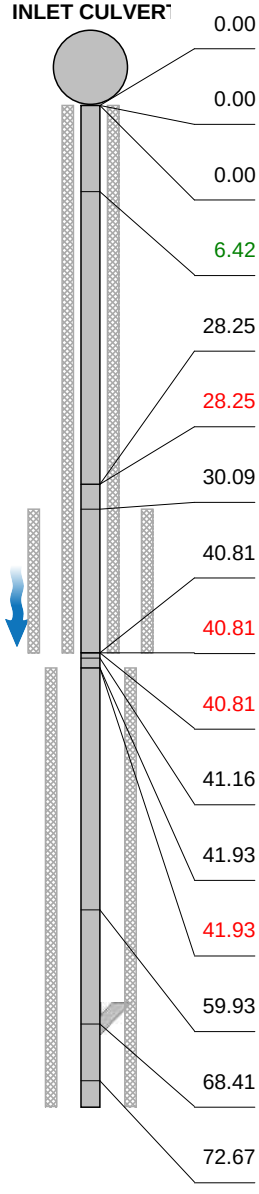
	m +	PACP Code	Observation
1	0.00	AZ	Access Point, Other
2	0.00	MWL	Miscellaneous Water Level, 5% of the vertical dimension
3	0.00	SCP	Surface Damage Corrosion from 5 o'clock to 7 o'clock, Start
4	6.42	IR	Infiltration Runner from 1 o'clock to 5 o'clock
5	28.25	SZ	Surface Damage Other at 10 o'clock
6	28.25	DFBI	Deformed Flexible Bulging Inverse Curvature, 10% changed from 2 o'clock to 5 o'clock
7	30.09	SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Start
8	40.81	LL	Line Left, 20% changed
9	40.81	SCP	Surface Damage Corrosion from 5 o'clock to 7 o'clock, Finish
10	40.81	SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Finish
11	41.16	MSC	Miscellaneous Shape or Size Change
12	41.93	SRC	Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Start
13	41.93	SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock
14	59.93	LL	Line Left, 20% changed
15	68.41	TBI	Tap Break-In Intruding at 10 o'clock, 450mm dim, 200mm intrusion
16	72.67	LR	Line Right, 30% changed
17	76.53	DFBI	Deformed Flexible Bulging Inverse Curvature, 40% changed, Start from 11 o'clock to 3 o'clock
18	82.24	MGP	Miscellaneous General Photograph from 12 o'clock to 12 o'clock
19	82.44	SRC	Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Finish
20	82.44	DFBI	Deformed Flexible Bulging Inverse Curvature, 40% changed, Finish from 11 o'clock to 3 o'clock
21	82.44	AMH	Manhole

WinCan

Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
2020-12-08		**Snow**	**GIANCARLO**	**U-0218070300019**	**INLET CULVERT-DISCHARGE**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream (camera pointing with flow**		**82.44 m**	**82.44 m**

City:	**CALEDON**	Drainage Area:		Upstream MH:	**INLET CULVERT**
Street:	**COLUMBIA WAY**	Media Label:		Up Rim to Invert:	**0.0**
Location Code:	Local rural streets with light traffic, town and city back st	Flow Control:		Downstream MH:	**DISCHARGE POINT**
Location Details:	INLET LOTATED AT NORTH EAST CORNE	Sheet Number:		Down Rim to Invert:	**0.0**
Pipe shape:	**Circular**	Sewer Use:	**Stormwater Pipe**	Total gallons used:	**0.0**
Pipe size:	**900 mm**	Sewer Category:	**SEC**	Joints passed:	**0**
Pipe material:	**Corrugated Metal Pipe**	Purpose:	**Maintenance Related**	Joints failed:	**0**
Lining Method:		Owner:	**NIELTECH SERVICES**		
Additional Info:					



1:563	Distance		Code	Observation	Counter	Photo	Grade
	0.00		AZ	Access Point, Other / INLET CULVERT	00:00:14	INLET CULVERT -DISCHAR	
	0.00		MWL	Miscellaneous Water Level, 5% of the vertical dimension	00:00:49	INLET CULVERT -DISCHAR	
	0.00	S01	SCP	Surface Damage Corrosion from 5 o'clock to 7 o'clock, Start	00:01:49	INLET CULVERT -DISCHAR	
	6.42		IR	Infiltration Runner from 1 o'clock to 5 o'clock	00:03:48	INLET CULVERT -DISCHAR	M4
	28.25		SZ	Surface Damage Other at 10 o'clock / METAL BENDED	00:10:26	INLET CULVERT -DISCHAR	
	28.25		DFBI	Deformed Flexible Bulging Inverse Curvature, 10% changed from 2 o'clock to 5 o'clock / METAL DEFORMED	00:11:47	INLET CULVERT -DISCHAR	S5
	30.09	S02	SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Start	00:12:46	INLET CULVERT -DISCHAR	
	40.81		LL	Line Left, 20% changed	00:15:00	INLET CULVERT -DISCHAR	M2
	40.81	F01	SCP	Surface Damage Corrosion from 5 o'clock to 7 o'clock, Finish	00:15:13	INLET CULVERT -DISCHAR	S3
	40.81	F02	SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Finish	00:15:30	INLET CULVERT -DISCHAR	S2
	41.16		MSC	Miscellaneous Shape or Size Change / OVAL CORRUGATED PIPE	00:16:26	INLET CULVERT -DISCHAR	
	41.93	S03	SRC	Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Start	00:17:25	INLET CULVERT -DISCHAR	
	41.93		SAV	Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock / VOID	00:18:04	INLET CULVERT -DISCHAR	S2
	59.93		LL	Line Left, 20% changed	00:23:36	INLET CULVERT -DISCHAR	M2
	68.41		TBI	Tap Break-In Intruding at 10 o'clock, 450mm dim, 200mm intrusion	00:25:26	INLET CULVERT -DISCHAR	M4
	72.67		LR	Line Right, 30% changed	00:27:32	INLET CULVERT -DISCHAR	M4

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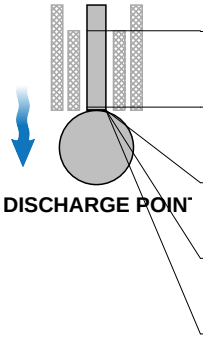
Inspection report

Date:	Work Order:	Weather:	Surveyed By:	Certificate Number:	Pipe Segment Ref.:
2020-12-08		**Snow**	**GIANCARLO**	**U-0218070300019**	**INLET CULVERT-DISCHARGE**
Year laid:	Pre-cleaning:	Direction:	Pipe Joint Length:	Total Length:	Length Surveyed:
	No Pre-Cleaning	**Downstream (camera pointing with flow**		**82.44 m**	**82.44 m**



1:563	Distance		Code	Observation	Counter	Photo	Grade
	76.53	S04	DFBI	Deformed Flexible Bulging Inverse Curvature, 40% changed, Start from 11 o'clock to 3 o'clock / PIPE BEND	00:30:11	INLET CULVERT -DISCHAR	
	82.24		MGP	Miscellaneous General Photograph from 12 o'clock to 12 o'clock / DEFORMED PIPE REAR VIEW	00:32:06	INLET CULVERT -DISCHAR	
	82.44	F03	SRC	Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Finish	00:33:22	INLET CULVERT -DISCHAR	S5
	82.44	F04	DFBI	Deformed Flexible Bulging Inverse Curvature, 40% changed, Finish from 11 o'clock to 3 o'clock / PIPE BEND	00:33:43	INLET CULVERT -DISCHAR	S5
	82.44		AMH	Manhole / DISCHARGE POINT	00:34:16	INLET CULVERT -DISCHAR	

QSR	QMR	QOR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5E3D	4322	5E43	257.0	16.0	273.0	3.8	3.2	3.8

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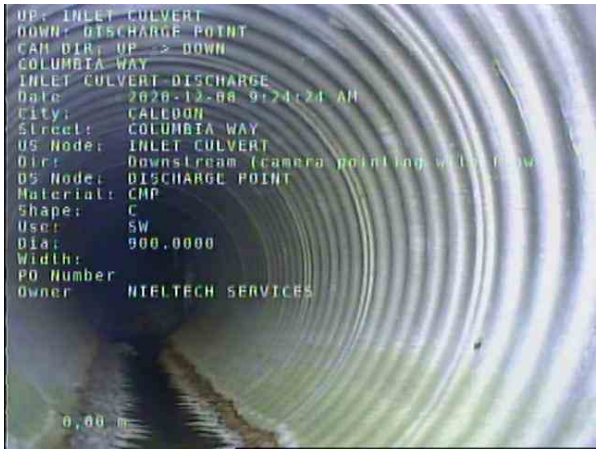
Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**



INLET CULVERT-DISCHARGE_30035326-4052-4ec9-ba08-703836a28a89_20201208_093448_230.jpg, 00:00:14, 0.00m
Access Point, Other / INLET CULVERT

INLET CULVERT-DISCHARGE_243c1020-df6f-4283-b21e-e7004d70d626_20201208_093527_412.jpg, 00:00:49, 0.00m
Miscellaneous Water Level, 5% of the vertical dimension

INLET CULVERT-DISCHARGE_613ebe02-6d0c-4ff9-bbec-7602c25ed51c_20201208_093628_556.jpg, 00:01:49, 0.00m
Surface Damage Corrosion from 5 o'clock to 7 o'clock, Start

INLET CULVERT-DISCHARGE_ded7b0c2-4e08-4c00-9172-f709dcf0d248_20201208_093632_171.jpg, 00:01:49, 0.00m
Surface Damage Corrosion from 5 o'clock to 7 o'clock, Start

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET
CULVERT-DISCHARGE_43b6d009-a22e-44c1-ad83-c2056119ffb8_20201208_093829_804.jpg, 00:03:48, 6.42m
Infiltration Runner from 1 o'clock to 5 o'clock

INLET
CULVERT-DISCHARGE_a3e8ae71-4ed7-45a5-99bc-153c6eb1335b_20201208_093832_833.jpg, 00:03:48, 6.42m
Infiltration Runner from 1 o'clock to 5 o'clock

INLET
CULVERT-DISCHARGE_24f5fdd5-cfb6-44e4-ad23-61af7d9d9f00_20201208_094946_883.jpg, 00:10:26, 28.25m
Surface Damage Other at 10 o'clock / METAL BENDED

INLET
CULVERT-DISCHARGE_148a401d-b0e9-4863-9b5b-5b105e2496ce_20201208_095107_264.jpg, 00:11:47, 28.25m
Deformed Flexible Bulging Inverse Curvature, 10% changed from 2 o'clock to 5 o'clock / METAL DEFORMED

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET CULVERT-DISCHARGE_bebdc32e-7ab0-495c-8782-307044862367_20201208_095213_655.jpg, 00:12:46, 30.09m
Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Start

INLET CULVERT-DISCHARGE_169778ce-8495-4340-b00a-a3d6e0835561_20201208_095209_745.jpg, 00:12:46, 30.09m
Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Start

INLET CULVERT-DISCHARGE_9172ec9b-4af0-4804-99ae-8cdda563b71d_20201208_095420_276.jpg, 00:15:00, 40.81m
Line Left, 20% changed

INLET CULVERT-DISCHARGE_6188b062-19c0-4427-ad26-6f1477ed9f40_20201208_095433_623.jpg, 00:15:13, 40.81m
Surface Damage Corrosion from 5 o'clock to 7 o'clock, Finish

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET CULVERT-DISCHARGE_90f9cb5a-adf3-4b87-87d5-404e808ef77e_20201208_095450_264.jpg, 00:15:30, 40.81m
Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock, Finish

INLET CULVERT-DISCHARGE_bf60c7bb-cf42-4ba3-844c-37eb90ae1691_20201208_095546_706.jpg, 00:16:26, 41.16m
Miscellaneous Shape or Size Change / OVAL CORRUGATED PIPE

INLET CULVERT-DISCHARGE_57bbdfe5-fc42-447f-b7a9-927a3f772709_20201208_095644_479.jpg, 00:17:25, 41.93m
Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Start

INLET CULVERT-DISCHARGE_76b68f24-d6bf-4149-ad94-c6724d9b2ed2_20201208_095649_733.jpg, 00:17:25, 41.93m
Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Start

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET CULVERT-DISCHARGE_3a33e20a-cdd5-4f3a-bf10-cfb526871de1_20201208_095723_752.jpg, 00:18:04, 41.93m
Surface Damage Aggregate Visible from 5 o'clock to 7 o'clock / VOID

INLET CULVERT-DISCHARGE_87fc0eb5-39f8-4df8-b13a-f871a463893c_20201208_100255_696.jpg, 00:23:36, 59.93m
Line Left, 20% changed

INLET CULVERT-DISCHARGE_7071ec05-3465-4536-812a-beacd65edb72_20201208_100446_340.jpg, 00:25:26, 68.41m
Tap Break-In Intruding at 10 o'clock, 450mm dim, 200mm intrusion

INLET CULVERT-DISCHARGE_3475fbaa-2b59-4026-a651-102acb52efb1_20201208_100652_620.jpg, 00:27:32, 72.67m
Line Right, 30% changed

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET CULVERT-DISCHARGE_bb2483f5-48cf-4048-a0a7-d98f62e278a2_20201208_100931_033.jpg, 00:30:11, 76.53m
Deformed Flexible Bulging Inverse Curvature, 40% changed, Start from 11 o'clock to 3 o'clock / PIPE BEND

INLET CULVERT-DISCHARGE_ab50d00f-07ad-447b-9210-7dfb47d012b3_20201208_100936_369.jpg, 00:30:11, 76.53m
Deformed Flexible Bulging Inverse Curvature, 40% changed, Start from 11 o'clock to 3 o'clock / PIPE BEND

INLET CULVERT-DISCHARGE_3c461139-a8bf-47de-955b-8327ac1e2423_20201208_101126_457.jpg, 00:32:06, 82.24m
Miscellaneous General Photograph from 12 o'clock to 12 o'clock / DEFORMED PIPE REAR VIEW

INLET CULVERT-DISCHARGE_51882f5d-ccb0-45c3-b9af-cecbe2ee2861_20201208_101134_754.jpg, 00:32:06, 82.24m
Miscellaneous General Photograph from 12 o'clock to 12 o'clock / DEFORMED PIPE REAR VIEW

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Section Pictures - 2020-12-08 - INLET CULVERT-DISCHARGE

City	Street	Date	Pipe Segment Reference	Section No.
CALEDON	**COLUMBIA WAY**	**2020-12-08**	**INLET**	**1**

INLET
CULVERT-DISCHARGE_0d2aa071-3f19-42f6-8c29-334970af3696_20201208_101241_978.jpg, 00:33:22, 82.44m
Surface Damage Reinforcement Corroded from 5 o'clock to 7 o'clock, Finish

INLET
CULVERT-DISCHARGE_2bc642c2-4069-4ee4-a20e-b879b4f9ffbe_20201208_101304_875.jpg, 00:33:43, 82.44m
Deformed Flexible Bulging Inverse Curvature, 40% changed, Finish from 11 o'clock to 3 o'clock / PIPE BEND

INLET
CULVERT-DISCHARGE_60075909-6fc8-410a-aee7-b5518ed0504d_20201208_101336_339.jpg, 00:34:16, 82.44m
Manhole / DISCHARGE POINT

INLET
CULVERT-DISCHARGE_c5f92424-ef47-4852-adef-ea4a8e891c40_20201208_101341_325.jpg, 00:34:16, 82.44m
Manhole / DISCHARGE POINT