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FUNCTIONAL SERVICING & STORMWATER MANAGEMENT REPORT

12245 TORBRAM ROAD
TULLAMORE LANDS

TOWN OF CALEDON
REGION OF PEEL

PREPARED FOR:

TULLAMORE INDUSTRIAL GP LIMITED

PREPARED BY:

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CROZIER
CONSULTING ENGINEERS

Revision Number	Date	Comments
Rev.0	June 29, 2021	Issued for DPOS, OPA & ZBA
Rev.1	December 2021	Issued for Plan of Subdivision
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1.0 Introduction

C.F. Crozier & Associates Inc. (Crozier) was retained by Tullamore Industrial GP Limited to prepare a Functional Servicing and Stormwater Management Report in support of a proposed 202.9 ha Business Park at 12245 Torbram Road (the Tullamore Lands). The Tullamore Lands are located on the north-west corner of Mayfield Road and Airport Road, in the Town of Caledon (Site). In September 2022, the province issued a Minister's Zoning Order (MZO) for this property, therefore this report is in support of the Draft Plan of Subdivision (DPoS) and Official Plan Amendment (OPA) application for the Site.

This Functional Servicing and Stormwater Management Report forms part of the OPA and DPoS applications. This report is to be read in conjunction with the Traffic Impact Study by Crozier (April 2023), the Comprehensive Environmental Impact Study and Management Plan by GEI Consultants (2023) and the Draft Plan of Subdivision by Weston Consulting (April 2023).

1.1 Site Description

The Site is primarily a greenfield area covering approximately 202.9 ha and is currently zoned as industrial per the MZO. The Site is bounded by Mayfield Road (Regional Road 14) to the south, Airport Road (Regional Road 7) to the east, greenfield lands to the north, and Torbram Road to the west.

The Site consists of primarily agricultural land and contains a Greenbelt area as well as two tributaries of the West Humber River. The Greenbelt area of the Site is located northeast of the Torrand Road and Mayfield Road intersection and a tributary of the West Humber River is conveyed through this Greenbelt area. A second tributary of the West Humber River passes through the middle of the Site. Both tributaries convey drainage southwards through existing culverts under Mayfield Road.

1.2 Proposed Development

The proposed development, as outlined on the Draft Plan of Subdivision (Weston Consulting, April 2023) includes three 26.0 m Right-of-Ways (ROWs), eight (8) development Blocks and two (2) stormwater management Blocks. The Draft Plan proposes no development within the Greenbelt area of the Site.

The first ROW (Street A) runs east-west through the Site and connects to Airport Road on the east. The second ROW (Street B) runs north-south through the Site connecting to Mayfield Road at the south limit of the site and extending to the north property limit where it ends with a cul-de-sac. The third ROW (Street C) runs east-west through the Site and connects to Torbram Road on the west. The eight (8) development blocks are proposed to contain industrial buildings. The two stormwater management Blocks are located along the south property line of the Site, near Mayfield Road. This stormwater management Blocks are proposed to service the entire Site including the eight (8) development Blocks and three ROWs.

1.3 Reference Documents

Crozier reviewed the following reports and design standards when preparing this report:

- Settlement Area Boundary Expansion (SABE) Water & Wastewater Servicing Analysis (GM BluePlan Engineering, August 12, 2021)

- Scoped Subwatershed Study, Part B – Detailed Studies and Impact Assessment (Final Report) for the Settlement Area Boundary (Wood Environmental and Infrastructure Solutions Inc., November 2022)
- FSR & SWM Report for Sandringham East Development (RAND Engineering Corp., October 2020)
- Region of Peel – 2020 Water and Wastewater Master Plan for the Lake Based Systems Volume 1, Volume 3, & Volume 4 (June 29, 2020)
- Functional Servicing Report for Countryside Villages Block 48-2 – Secondary Plan Area 48 (The Municipal Infrastructure Group Ltd. (TMIG), April 2017)
- Environmental Implementation Report – Block 48-2, Countryside Villages (Beacon Environmental Ltd., April 2017)
- Humber River Watershed – Scenario Modelling and Analysis Report (TRCA, 2008)
- Humber River Hydrology Update (Civica April 2018)
- Humber River Watershed Plan – Pathways to a Heathy Humber (TRCA, June 2008)
- Two hydraulic model files – Estimated Model of the WHR West Branch and Engineered Model of the Final West Humber (TRCA, received on April 9, 2021)
- Flood Plain Mapping Program, Humber River Sheet 125 (TRCA, May 2018)
- Preliminary Hydrogeological Investigation (Toronto Inspection Ltd., June 30, 2021)
- Geotechnical Investigation (Toronto Inspection Ltd., June 24, 2021)
- Comprehensive Environmental Impact Study and Management Plan (GEI Consultants Ltd., 2023)
- East Tributary – Hydraulic Analysis Report (C.F. Crozier & Associates Inc., April 2023)
- Development Standards Manual (Town of Caledon, 2019)
- Stormwater Management Criteria (TRCA, August 2012)
- Sanitary Sewer Design Criteria (Region of Peel, 2017)
- Watermain Design Criteria (Region of Peel, 2010)
- Guidance for Development Activities in Redside Dace Protected Habitat Version 1.2 (Ministry of Natural Resources and Forestry, March 2016).

2.0 Sanitary Servicing

2.1 Sanitary Design Criteria

The proposed sanitary sewers will be designed and constructed to current Region of Peel and Ministry of Environment, Conservation, and Parks criteria and specifications. The sanitary design criteria are as follows:

- Population Density - 70 persons/ha (Industrial)
- Infiltration - 0.20 L/s/ha
- Sanitary Sewage Demand – 302.8 L/capita/day
- Harmon Peaking Factor

2.2 Existing Municipal Sanitary System

Review of the Region of Peel as-built drawing 38114-D shows an existing 750 mm diameter gravity sanitary sewer sloping at 0.30% on Airport Road (Regional Road 7) (refer to Appendix A). The existing sewer is on the west side of the Airport Road ROW and currently services Caledon East. This sanitary sewer conveys sewage south along Airport Road past Mayfield Road. There is no existing sanitary infrastructure along Torbram Road and Mayfield Road.

2.3 Proposed Regional Sanitary Infrastructure

As per the Region of Peel Water and Wastewater Master Plan (June 2020), there are planned sanitary infrastructure projects in the vicinity of the Site. The proposed Regional infrastructure includes Region Project Numbers ST—011, ST-009 and ST-178.

- ST-011: 600 mm diameter sanitary sewer through the lands south of Mayfield Road from Airport Road to approximately 1,070 m north-westerly
- ST-009: 600 mm diameter sanitary sewer through the lands south of Mayfield Road from Mayfield Road to approximately 750 m south-easterly
- ST-178: 600 mm diameter sanitary sewer from Mayfield Road to approximately 1,700 m north

There is an ongoing Draft Plan of Subdivision application south of the Site in the City of Brampton that is included in Secondary Plan Area 48. The subdivision is known as Sandringham East (21T-19020B) and the civil engineer working on this subdivision is Rand Engineering Corporation. As part of Sandringham East, a 600 mm diameter sanitary trunk sewer is proposed along Future Street 11.

Through coordination with the Region, it is understood that the construction timeline of these proposed Regional Infrastructure projects will be developer driven. Discussions with Rand Engineering Corporation have suggested that the construction of ST-011 and ST-009 will take place in the year 2026-2027.

2.4 Proposed Sanitary Sewer System

Sanitary servicing to the proposed Blocks will be provided within Street A, B and C. The sanitary servicing internal to the Site has two outlets, one along Street A to the existing 750 mm diameter sewer on Airport Road, and the other along Street B to the future 600 mm sanitary sewer proposed as part of Sandringham East subdivision.

Note, the proposed location of the 600 mm diameter sanitary sewer in the Sandringham East subdivision (on Street 11) does not align with the proposed location of the Street B. A servicing easement is required within the Site to allow for a connection to the future 600 mm diameter sanitary sewer. The proposed sanitary sewer configuration is shown on Drawings C101-C101A.

Crozier has calculated the sanitary sewage design flows based on the Draft Plan (Weston Consulting, April 2023) and the Site Plan (Turner Fleischer, 2023), the criteria outlined in Section 2.1 and the sanitary drainage areas as shown on Figure 1. Table 1 outlines the sanitary demands for each block and detailed calculations are included in Appendix A.

Table 1: Proposed Sanitary Demand Flows

Block	Equivalent Population	Peak Flow (L/s)	Infiltration Flow (L/s)	Total Flow (L/s)	Outlet
1	705	9.62	7.28	16.90	Airport Rd
2	235	3.39	2.37	5.76	Mayfield Rd
3	528	7.33	4.24	11.57	Mayfield Rd
4	656	8.99	3.76	12.75	Airport Rd
5	470	6.57	3.49	10.06	Airport Rd
6	99	1.48	0.78	2.26	Mayfield Rd
7	661	9.05	3.63	12.68	Mayfield Rd
8	519	7.21	3.45	10.66	Mayfield Rd
Total	**3872**	**53.64**	**29.00**	**82.63**	

As described in the table above, Blocks 1, 4 and 5 are proposed to outlet to a proposed 300 mm gravity sanitary sewer on Street A and outlet to the existing 750 mm sanitary sewer on Airport Road. As stated in a letter received from the Region of Peel, dated November 23, 2021, there is enough sanitary sewer capacity to service 32.58 ha of this Site in the existing 750 mm sanitary sewer on Airport Road. Confirmation of additional capacity within the existing 750 mm sanitary sewer is ongoing with the Region for the additional lands now proposed to outlet to Airport Road.

Blocks 2, 3, 6, 7 and 8 will outlet to a 600 mm diameter sanitary sewer in Street B. As previously described, this 600 mm sanitary sewer outlets to the future 600 mm sanitary sewer proposed as part of the Sandringham East subdivision.

Note, we are working with Region staff to confirm design capacity (as equivalent population) for future external contributions to this 600 mm sewer based on the Region's Master Servicing studies.

The proposed sanitary sewer design includes minimum slopes of 0.35% up to a maximum of 2.00% based on the proposed servicing design. Based on the detailed sanitary sewer design sheets (Appendix A) the maximum flow generated from this development can be accommodated within the sewers designed for Street A & Street B.

3.0 Water Servicing

3.1 Water Design Criteria

Water servicing for the subject lands will be designed in accordance with the Region of Peel standards and specifications to ensure that adequate pressures and flows are achieved.

Watermain design flows will be based on the following criteria:

- Average Day Demand - 300 L/capita/day
- Population Density - 70 persons/ha (industrial)
- Maximum Day Factor – 1.4
- Peak Hour Factor – 3.0
- Design Flow – Greater of Maximum Daily Demand plus Fire Flow or Peak Hourly Demand

3.2 Existing Water Services

Based on review of Region of Peel as-built drawings, there are several existing watermains in the vicinity of the Site. As per as-built drawing 29039-D, there is an existing 300 mm diameter local watermain on Airport Road that connects to an existing 300 mm diameter watermain on Mayfield Road (refer to Appendix B). Additionally, a 200 mm diameter watermain on Torbram Road is connected to the existing 300 mm diameter watermain on Mayfield Road. The Site is in Pressure Zone 6 within the South Region of Peel Water Supply System.

3.3 Proposed Regional Water Infrastructure

As per Region of Peel Water and Wastewater Master Plan (June 2020), there are several planned watermain infrastructure projects in the vicinity of the Site. The Region proposed that the following watermains be constructed around 2036 under Region Project numbers D-180 to D-182:

- D-180 to D-182: 400 mm watermain on Airport Road, Torbram Road and a future street proposed across the Site (construction year 2036)

3.4 Proposed Watermain System

The proposed water servicing system includes 300 mm and 400 mm diameter watermains creating a looped system around the Site. On Street B, the 300 mm diameter watermain will connect to the existing 300 mm watermain on Mayfield Road and will transition to 400 mm at the intersection with Street A. A 400 mm diameter watermain is proposed along Street A and Street C, as per the future Region Project. The proposed 400 mm diameter watermains will connect to the existing watermains on Airport Road and Torbram Road. The proposed watermain layout is depicted on Figure 2.

All Blocks will be serviced with a 250 mm diameter fire service and 150 mm diameter domestic water service as per Region of Peel Standard 1-8-6. Hydrants have been placed within the ROWs on the Site based on the Town's required spacing.

The domestic water demand has been calculated based on the Draft Plan (Weston Consulting, April 2023). Table 2 below summarizes the domestic water demands for each block. The detailed calculations are included in Appendix B.

Table 2: Domestic Water Demands

Block	Equivalent Population	Average Daily Demand (L/s)	Maximum Daily Demand (L/s)	Peak Hourly Demand (L/s)
1	705	2.45	3.43	7.34
2	235	0.81	1.14	2.44
3	528	1.83	2.57	5.50
4	656	2.28	3.19	6.84
5	470	1.63	2.28	4.90
6	99	0.34	0.48	1.03
7	661	2.29	3.21	6.88
8	519	1.80	2.52	5.40
Total	**3872**	**13.45**	**18.82**	**40.34**

As shown in the table above, the total average, maximum and peak hour demands for the Site are 13.458 L/s, 18.82 L/s, and 40.34 L/s, respectively.

The fire flow requirements for the Site were also calculated based on the Fire Underwriters Survey (FUS) requirements, as shown in Table 3 below.

Table 3: Fire Flow Demands – Fire Underwriter's Survey

Block	Building	Fire Flow (L/s)
1	A	300.0
2	I	166.7
3	C	250.0
4	D	283.3
5	H	250.0
6	K	133.3
7	E	283.3
8	F	250.0

The FUS calculations included in Table 3 are conservative and have been completed for each building. Note, the FUS flows will be further refined at the Site Plan Application Stage. Each block may retain a fire suppression consultant to calculate the building specific fire flow demands based on the individual fire suppression tactics that are proposed in each building.

A hydrant flow test completed by Watermark Solutions Limited on June 29, 2021 for hydrants located on Airport Road, Mayfield Road, Torbram Road. The results indicate that there is an available fire flow of 202 L/s (3199 USGPM), 1,134 L/s (17,980 USGPM), and 101 L/s (1,599 USGPM) on Airport Road, Mayfield Road, and Torbram Road respectively.

In a meeting on March 3, 2023, the Region confirmed that water modeling has been completed for the Site and that the entire Site is serviceable based on the water and fire demands provided in this report. Minutes from the meeting on March 3, 2023 are included in Appendix B.

4.0 Grading and Storm Drainage

4.1 Site Grading

The site grading design will take into consideration the following requirements and constraints:

- Conform to the Town's grading criteria;
- Match existing boundary grading conditions;
- Minimize required earthworks;
- Provide minimum cover on proposed servicing infrastructure; and,
- Provide overland flow conveyance for major storm conditions.

The Site has been designed to match the existing topography where possible, while ensuring positive drainage towards the proposed stormwater management facilities. Road grades are proposed such that the ROWs are utilized as overland flow routes to direct the major storm events to the proposed stormwater management facility (Wetland 2). The proposed preliminary road centerline grades and overland flow routes are shown on Drawings C102-C102A.

5.0 Stormwater Management

5.1 Stormwater Management Criteria

The stormwater management strategy for the Site shall adhere to the design guidelines for the Town of Caledon, the TRCA, the Ministry of the Environment, Conservation and Parks (MECP) and the Ministry of Natural Resources and Forestry (MNRF). Stormwater management design criteria for the proposed development are established in accordance with the following documents:

- Development Standards Manual (Town of Caledon, 2019)
- Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) Stormwater Criteria (Town of Caledon, 2023)
- Stormwater Management Criteria (TRCA, August 2012)
- Ministry of the Environment – Stormwater Management Planning and Design Manual (March 2003)
- Ministry of Natural Resources and Forestry – Guidance for Development Activities in Redside Dace Protected Habitat (March 2016)

The stormwater management design objectives for the Site are summarized in the following pages.

<u>Stormwater Conveyance Systems</u>

Stormwater conveyance within the Site must be designed to meet Town standards. According to Town criteria, the storm sewer (minor) systems must be designed to provide conveyance of runoff from the 5-year design storm for systems that do not allow for foundation drains to be connected to the storm sewer system.

To provide safe access to all blocks on the site the stormwater conveyance system must also account for the safe conveyance of the uncontrolled regional storm through the site. As such the roadways, which will convey much of the regional flows from the site, must be graded such that the depth x velocity product for the road and block entrance is less than 0.4 m^2/s and the maximum depth is less than 0.3 m. It is noted that Town of Caledon standards requires that the depth x velocity product in the gutter be less than 0.65 m^2/s.

Stormwater Quantity Control

According to the Town of Caledon Development Standards Manual (2019), "all newly developing or redeveloping areas must assess their potential impacts on local and Regional flooding and mitigate accordingly." Given that the property is located within a TRCA regulated area, the Site is within TRCA jurisdiction and therefore, stormwater quantity control is also regulated by the conservation authority. Additionally, per the Town's CLI-ECA Stormwater Criteria, water quantity control is to be per the municipal standards, Master Stormwater Management Plan, Class EA, Individual EA and/or ECA, as appropriate.

According to the Stormwater Management Criteria prepared by TRCA (August 2012), control of post-development peak stormwater flows to pre-development levels for all design storm events, up to and including the 100-year storm event, is required. Unit flow relationships have been established by the TRCA for all areas located within the Humber River Watershed, not discharging to the main branches of the Humber River. The site is located within Sub-Basin 36 so peak flows must be controlled to meet the unit flow rates. Refer to Section 5.7.2 for more details regarding the flow targets for the Site.

Erosion Control

At a minimum, TRCA requires on-site retention of the first 5 mm of rainfall. This criterion is applied where the sensitivity of the receiving watercourses does not warrant a more comprehensive analysis of the erosion potential associated with urban development. For properties with stormwater management facilities, extended detention of the 25 mm design storm event for a period of 48-hours are required.

The East Tributary (Figure 3) has been identified as a potential erosion concern as per the Scoped Subwatershed Study for the Settlement Area Boundary Expansion (Wood Environmental and Infrastructure Solutions Inc., November 2022). Therefore, erosion concerns associated with discharge from the Site will need to be evaluated further to determine whether additional stormwater management measures to mitigate erosion will be required. Further coordination between Crozier and GEI will be required through detailed design to evaluate erosion concerns on Site.

It is noted that the above requirements are also in line with the Town's CLI-ECA Stormwater Criteria.

Stormwater Quality Control

Both the Town and TRCA require an Enhanced level of water quality protection (80% total suspended solids (TSS) removal) for the Site. TRCA notes that this criterion represents a minimum requirement that may be superseded by the results of additional studies or provincial requirements.

Tributaries of the Humber River crossing the Site have been identified by GEI as contributing habitat for Redside Dace. As such, the Guidance for Development Activities in Redside Dace Protected Habitat Version 1.2 (MNRF, March 2016) needs to be followed. This guidance manual sets limits for temperature, dissolved oxygen and TSS as indicated below:

- Discharge temperature should be below 24°C
- Dissolved oxygen concentrations of minimum 7 mg/L
- Maximum TSS of 25 mg/L above the background stream level of TSS

It is noted that the Site does not drain towards Lake Erie or Lake Simcoe therefore, phosphorus loading is not a concern.

Water Balance

Water balance criteria according to TRCA requirements are determined with respect to recharge and protection of natural features. TRCA has undertaken modeling to understand water budget parameters throughout their jurisdiction. The results distinguish between four types of recharge areas within the TRCA's watershed, each with corresponding recharge criteria. According to these modeling results, the subject site is not located within a significant recharge area.

For developments proposed near identified natural features, additional investigation is required to understand water balance impact on those specific features. The natural features identified within the Site include wetlands, watercourses and headwater drainage features. The overall objective is to manage water balance to maintain the quantity of surface water and groundwater contributions to these features. Baseline conditions need to be established to assess the water balance target for these features. Crozier will work with GEI to determine feature-specific water balance requirements throughout detailed design. Consultation with TRCA will also be required to confirm the targets set for these features.

In addition to maintaining the water balance for the proposed development area, an overall site water balance is also required. A water balance analysis is required using the average and more frequent precipitation events that comprise of the bulk volume of annual precipitation to ensure maintenance of pre-development water balance following development. The water balance for the public lands will be reviewed under the Town's CLI-ECA Stormwater Criteria while the water balance for the industrial blocks will require an ECA at the time of Site Plan Application for the individual private blocks. The target is to match pre-development proportions of infiltration, runoff and evapotranspiration. Refer to Section 5.9 for more details on the site-specific water balance and the infiltration targets set for each Block.

Construction Erosion and Sediment Control

The CLI-ECA Stormwater Criteria for construction erosion and sediment control will be achieved through the separate Topsoil Stripping Permit application completed for the Site. Refer to the Erosion and Sediment Control Report and associated drawings completed by Crozier (April 2023) included under separate cover for more details.

Regional Analysis

As the proposed development includes the removal of the watercourse which traverse the site and their associated floodplain storage, a cut/fill balance is required to replace the lost floodplain

storage. Refer to Section 5.7.3 for more information related to the flood storage volume provided on Site.

5.2 Drainage Conditions

5.2.1 Existing Drainage Conditions

The Site is located within the regulation limits of the Toronto and Region Conservation Authority (TRCA) and is bisected by three tributaries of the West Humber River. The tributaries located in the northeast and southwest corners of the Site are well-defined watercourses and are herein referred to as Salt Creek and the "West Tributary", respectively. The smaller tributary, herein referred to as the "East Tributary", flows southwards through the middle of the property and outlets to an existing culvert under Mayfield Road near the southeast corner of the property.

The West Tributary has been identified within the *Comprehensive Environmental Impact Study and Management Plan* by GEI Consultants as habitat for Redside Dace (January 2023). The East Tributary has been identified as an area of contributing habitat for Redside Dace and identified as a headwater drainage feature by GEI Consultants (January 2023).

According to aerial imagery and confirmed through Crozier's site visit on April 8, 2021, the property currently consists of agricultural land and was occupied by a cattle farm. Based on a review of the topographic survey completed by Young & Young Surveying Inc. (May 2021, July 2021 & October 2021) and the 0.5 m contour information obtained through the Ontario Classified Point Cloud Data (accessed via online Equator Software on April 8, 2021), most of the Site generally slopes towards each of the east and west tributaries located on the property, which convey flows southwards towards Mayfield Road. A northeast portion of the Site slopes gently east towards Airport Road, while a small section of the Site drains towards Salt Creek. Based on the existing topography, the Site has been divided into a total of ten (10) subcatchments.

In addition to drainage within the property, there is a combined 15.3 ha external area that also drains through the Site. These areas generally flow southwards and are conveyed through the East Tributary on site, apart from a 1.41 ha area which drains through the site towards Airport Road and a 1.9 ha area that drains towards the West Tributary. The external catchments have been delineated according to the locations at which runoff enters each branch of the East Tributary to facilitate floodplain modeling.

Table 4 summarizes each drainage catchment under existing conditions. The table includes Time to Peak (Tp) values and SCS Curve Numbers (CN) , which were determined based on existing soil, land use, and topographic conditions. The time to peak values were calculated using the Airport Method since runoff coefficient values were less than 0.40 and the drainage areas are less than 1 km^2 for all analyzed existing catchments.

The Airport Method uses the travel length and average slope within a catchment to determine the Time to Peak.

According to the Ontario Soil Survey, there are generally two dominant soil types present on site: Chinguacousy Clay Loam and Peel Clay. Existing land cover on Site is mostly classified as meadow, resulting in CN values of 84 and 79 for Peel Clay and Chinguacousy Clay Loam, respectively. For catchments that include both soil types, the weighted average was determined accordingly. The values presented in Table 4 were determined as described above however, it is noted that CN values were converted to CN* within VO software for the 2-year to 100-year storm events and converted to CNIII within VO for the Regional model to better represent the available soil moisture storage volume during a storm event. Refer to Table 4 for a summary of CN and Tp values.

The total imperviousness (TIMP) and directly connected imperviousness (XIMP) values for each STANDHYD were determined based on the proposed land cover on Site. It is noted that highly pervious catchments are represented as NASHYDs (which do not require TIMP/XIMP inputs), and highly impervious catchments are represented as STANDHYD commands. The TIMP of each catchment is determined based on the proposed surface on site. For external catchments, TIMP values were calculated using the runoff coefficient (RC) for the catchment and is calculated as (RC-0.2)/0.7. The XIMP values are determined as TIMP-0.2.

Note that the parameters used for all external catchments remain the same under pre-development and post-development conditions. Refer to Table 4 for a summary of TIMP and XIMP values, and Appendix C for a summary of the hydrologic parameters used during modeling. Figure 3 illustrates the pre-development drainage areas.

Table 4: Pre-Development Catchments

Catchment ID	**Area** (ha)	**Runoff Coefficient**	**TIMP**	**XIMP**	**Curve Number** (CN - AMCII)	**CN* (AMC II)**	**Time to Peak** (hr)	**Outlet**
101	34.6	0.25	-	-	79	82	0.64	West Tributary (34.6 ha)
102	46.7	0.25	-	-	82	85	0.99	East Tributary (140.5 ha)
103	17.0	0.25	-	-	84	88	0.75	
104	32.3	0.25	-	-	84	88	0.94	
105	13.4	0.25	-	-	80	82	0.62	
106	31.1	0.28	-	-	79	82	1.00	
107	1.8	0.25	-	-	84	88	0.31	Airport Road (13.3 ha)
108	11.5	0.25	-	-	84	88	0.63	
109	4.9	0.25	-	-	82	85	0.54	Southeast Neighbors (4.9 ha)
110	9.7	0.25	-	-	84	88	0.46	Salt Creek (9.8 ha)
111	0.1	0.25	-	-	84	88	0.29	
Total Site	**202.9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
EXT1	0.6	0.36	-	-	79	79	0.29	West Tributary (1.9 ha)
EXT2	1.3	0.35	-	-	79	79	0.21	
EXT3	3.4	0.49	0.42	0.22	79	68	-	East Tributary (9.7 ha)
EXT4	4.9	0.25	-	-	79	82	0.50	
EXT5	0.9	0.25	-	-	84	88	0.33	
EXT6	0.5	0.25	-	-	84	88	0.20	
EXT7	1.4	0.60	0.57	0.37	84	82	-	Airport Road[1] (1.4 ha)
EXT8	1.4	0.60	0.57	0.37	79	77	-	East Tributary (2.3 ha)
EXT9	0.9	0.58	0.54	0.34	79	78	-	
Total External	**15.3**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

1. External flows runoff towards Catchment 107 and ultimately outlet to Airport Road.

Stormwater runoff from most of the Site is directed to the East Tributary under existing conditions. Catchments on Site have been delineated according to where runoff enters the East Tributary to facilitate floodplain modeling. There are two (2) man-made berms located within the property along the East Tributary which create upstream ponds (labeled as the north pond and south pond on Figure 3). It is likely that these berms were constructed by the farmer to create drinking water areas for the farm animals and to provide access to the property across the naturally existing low

valley area. Existing culverts allow flows to pass through both berms, controlling the flow rates out of the ponds, and consequently impacting the drainage conditions on Site.

As described, there are five (5) main stormwater outlets for the Site under existing conditions: the West Tributary, the East Tributary, Airport Road, the neighboring property to the southeast and Salt Creek. Visual OTTHYMO (VO), a hydrologic stormwater modeling software, was used to determine the pre-development peak runoff directed to each outlet; the modelling results are summarized in the following tables.

Per TRCA standards for the Humber River, return period peak flows based on both the 6-hour and 12-hour AES design storm distributions have been modeled. Refer to Tables 5 to 8 for a summary of total Site and external pre-development uncontrolled flows directed to each outlet during the 6-hour and 12-hour storms, respectively. Detailed VO model inputs and results are included in Appendix C.

Table 5: Pre-Development Uncontrolled Runoff Summary to Watercourses (6-Hour Storm)

Storm Event (years)	**Uncontrolled Peak Runoff Rates** (m^3/s)						
	West Tributary			**East Tributary**			**Salt Creek**
	External Areas	**Site Areas**	**Total**	**External Areas**	**Site Areas**	**Total**	**Site Area**
2	0.047	0.448	**0.469**	0.299	1.748	**1.612**	0.209
5	0.080	0.815	**0.851**	0.490	3.078	**2.861**	0.367
10	0.105	1.091	**1.141**	0.634	4.066	**3.805**	0.484
25	0.139	1.466	**1.534**	0.823	5.381	**5.113**	0.637
50	0.164	1.764	**1.843**	0.972	6.407	**6.186**	0.755
100	0.191	2.068	**2.158**	1.147	7.451	**7.304**	0.873
Regional	0.047	4.099	**4.307**	1.587	15.363	**16.387**	1.287

Table 6: Pre-Development Uncontrolled Runoff Summary (6-Hour Storm)

Storm Event (years)	**Uncontrolled Peak Runoff Rates** (m^3/s)			
	Airport Road			**Neighboring Property**
	External Areas	**Site Areas**	**Total**	**Site Area**
2	0.081	0.250	**0.267**	0.081
5	0.118	0.439	**0.459**	0.145
10	0.145	0.576	**0.597**	0.193
25	0.179	0.756	**0.778**	0.256
50	0.205	0.894	**0.920**	0.307
100	0.238	1.034	**1.058**	0.358
Regional	0.204	1.627	**1.750**	0.614

Table 7: Pre-Development Uncontrolled Runoff Summary to Watercourses (12-Hour Storm)

Storm Event (years)	Uncontrolled Peak Runoff Rates (m^3/s)						
	West Tributary			East Tributary			Salt Creek
	External Areas	Site Areas	Total	External Areas	Site Areas	Total	Site Area
2	0.040	0.464	**0.485**	0.249	1.820	**1.729**	0.213
5	0.063	0.782	**0.817**	0.388	2.991	**2.850**	0.343
10	0.080	1.016	**1.065**	0.490	3.845	**3.687**	0.435
25	0.102	1.331	**1.392**	0.621	4.966	**4.811**	0.552
50	0.119	1.573	**1.644**	0.723	5.827	**5.717**	0.641
100	0.136	1.823	**1.904**	0.828	6.706	**6.655**	0.730

Table 8: Pre-Development Uncontrolled Runoff Summary (12-Hour Storm)

Storm Event (years)	Uncontrolled Peak Runoff Rates (m^3/s)			
	Airport Road			Neighboring Property
	External Areas	Site Areas	Total	Site Area
2	0.054	0.254	**0.274**	0.084
5	0.075	0.410	**0.439**	0.138
10	0.091	0.520	**0.555**	0.178
25	0.110	0.664	**0.707**	0.23
50	0.124	0.771	**0.822**	0.269
100	0.138	0.880	**0.939**	0.309

Note that addition of the individual flows from the external and site areas do not exactly equal the total flows to each outlet shown in the above tables. These differences in peak flows occur because the total flows to each outlet were calculated in VO (accounting for channel routing and time to peak values), whereas the total external and total site flows presented in the table above were calculated by manually adding the peak runoff rates from the individual catchments (i.e., without channel routing and without consideration of time to peak values when adding these peak flows together).

5.2.1.1 Existing Mayfield Road Culvert

There is an existing culvert crossing Mayfield Road located in the southeast corner of the Site; this culvert conveys flows from the East Tributary on the property southwards beneath Mayfield Road. The existing culvert was enlarged as part of the works completed during the Mayfield Road widening.

According to the Issued for Tender drawings prepared by IBI Group (March 2017), the Mayfield Road culvert is a 6,706 mm by 1,829 mm precast open-bottom culvert with a slope of 0.865%. Details of the existing culvert are included in Appendix C.

According to the Hydraulic Analysis Report prepared by Crozier under separate cover, the Mayfield Road culvert conveys the Regional and all other storm events and flooding does not overtop Mayfield Road. Refer to the *East Tributary – Hydraulic Analysis Report* prepared by Crozier (April 2023) for more details.

5.2.2 Proposed Drainage Conditions

Full build-out of the Site is proposed to consist of:

- Eight (8) industrial Blocks to be further designed as part of individual Site Plan Applications.

- Three (3) Right-of-Ways: one (1) running north-south providing connection to Mayfield Road (Street B), one (1) running east-west providing connection to from the internal north-south road to Airport Road (Street A) and another running east-west providing connection to from the internal north-south road to Torbram Road (Street C).

- Stormwater management facilities in the form of two (2) wetlands and a Natural Heritage System (NHS) / Environmental Protection Area (EPA).

The proposed grading on Site is designed to maintain the existing drainage patterns as closely as possible. Under post-development conditions, most stormwater flows will outlet to the west and the east tributaries, with some minor flows being directed towards Salt Creek uncontrolled, mimicking existing conditions. Table 9 summarizes the post-development drainage areas as shown in Figure 4.

Table 9 includes SCS curve number (CN) and time to peak (Tp) values, which were determined based on existing soil and topographic conditions. The time to peak values were calculated using the Airport Method since runoff coefficient values were less than 0.40 and the drainage areas are less than 1 km^2 for all analyzed existing catchments. SCS Curve Numbers were determined for each catchment based on the existing soils on Site.

As previously discussion in Section 5.2.1, there are generally two dominant soil types presents on site; Chinguacousy Clay Loam and Peel Clay. The CN values of 84 and 79 for Peel Clay and Chinguacousy Clay Loam, respectively, were maintained in areas where highly pervious covers remain post-development. For catchments that include both soil types, the weighted average was determined accordingly.

The values presented in Table 9 were determined as described above however, it is noted that CN values were converted to CN* within VO software for the 2-year to 100-year storm events and converted to CNIII within VO for the Regional model to better represent the available soil moisture storage volume during a storm event. Refer to Table 9 for a summary of CN and Tp values.

The TIMP and XIMP values for each STANDHYD were determined based on the proposed land cover on Site. The TIMP of each catchment is determined based on the proposed surface on site. According to the typical 26.0 m right-of-way section for industrial collector (Town of Caledon Standard No. 211, April 2019), approximately 10% of the road area will consist of landscaping. The zoning for industrial blocks was also reviewed and indicates that a minimum 10% landscaping must be provided. Therefore, all blocks and roads have been assumed to have 10% of their total area landscaped. The total landscaping provided for each block will need to be reviewed at the detailed design stage.

It is noted that for catchments consisting only of rooftops, TIMP was assigned as 0.99, representing completely impervious cover. The XIMP values are determined as TIMP-0.20, except for the rooftop (Catchment 201) and the stormwater management pond (Catchment 210) areas, where XIMP = TIMP.

As indicated in Section 5.2.1, the parameters for the external catchments remain the same under pre-development and post-development conditions. Refer to Table 9 for a summary of TIMP

and XIMP values, and Appendix D for a summary of the hydrologic parameters used during modeling.

Table 9: Post-Development Catchments

Catchment ID	Area (ha)	Runoff Coefficient	TIMP	XIMP	Curve Number (CN)	Time to Peak (hr)	Outlet
200	29.1	0.25	-	-	79	0.66	West Tributary (30.02 ha)
201[1]	0.92	0.90	0.99	0.99	98	-	
202	18.2	0.84	0.91	0.71	82	-	East Tributary (164.88 ha)
203	0.9	0.84	0.91	0.71	84	-	
204	1.7	0.84	0.91	0.71	82	-	
205	17.3	0.84	0.91	0.71	83	-	
206	20.2	0.84	0.91	0.71	84	-	
207	1.8	0.84	0.91	0.71	84	-	
208	18.8	0.84	0.91	0.71	84	-	
209	1.8	0.84	0.91	0.71	84	-	
210	36.6	0.84	0.91	0.71	80	-	
211	0.9	0.84	0.91	0.71	81	-	
212	17.7	0.84	0.91	0.71	83	-	
213	4.3	0.50	0.50	0.50	79	-	
214	9.68	0.84	0.91	0.71	79	-	
215	3.9	0.84	0.91	0.71	79	-	
216	1.6	0.84	0.91	0.71	81	-	
217	4.5	0.50	0.50	0.50	79	-	
218	4.0	0.50	0.50	0.50	79	-	
219	1.0	0.25	-	-	79	0.33	
220	8.0	0.25	-	-	84	0.44	Salt Creek (8.0 ha)
Total Site	**202.9**	**-**	**-**	**-**	**-**	**-**	**-**
EXT1	0.6	0.36	-	-	79	0.29	West Tributary (1.9 ha)
EXT2	1.3	0.35	-	-	79	0.21	
EXT3A	1.4	0.47	0.38	0.18	79	-	East Tributary (13.4 ha)
EXT3B	2.0	0.51	0.44	0.24	79	-	
EXT4	4.9	0.25	-	-	79	0.50	
EXT5	0.9	0.25	-	-	84	0.33	
EXT6	0.5	0.25	-	-	84	0.20	
EXT7	1.4	0.60	0.57	0.37	84	-	
EXT8A	0.4	0.60	0.57	0.37	79	-	
EXT8B	1.0	0.60	0.57	0.37	79	-	
EXT9	0.9	0.58	0.54	0.34	79	-	
Total External	**15.3**	**-**	**-**	**-**	**-**	**-**	**-**

1. Rooftop redirection from Block 2 to West Tributary.

Most of the stormwater runoff from the Site will continue to drain to the East Tributary under proposed conditions, like existing drainage conditions. Catchments 202, 205, 206, 208, 210, 212, 214 and Catchment 215 represent the future industrial Blocks. Stormwater runoff from the industrial blocks will be captured by the internal block storm sewer systems and controlled on-site to the 5-year post-development design storm event. Controlled Block flows will discharge to the proposed storm sewer system within Street B and conveyed to the proposed stormwater management (SWM) facilities located near the southeast corner of the Site (represented as

Catchments 213 and 217). The SWM facilities are designed to provide quantity, quality, and erosion control of stormwater runoff prior to its release to the East Tributary. Refer to Section 5.7 for more details.

Stormwater runoff from the remainder of the internal Site catchments (Catchments 203, 207, 209, 211 and Catchment 216, representing the proposed ROWs) will be conveyed through the Site to the SWM facilities. Proposed storm sewers within the ROWs will convey the 100-year design storm event from these catchments. Runoff from storms exceeding the capacity of the sewer system will be conveyed overland, contained within the ROWs, ultimately discharging to southmost SWM facility (Wetland 2).

The proposed development will not alter the external drainage catchments, and conveyance for all external catchments will be maintained post-development. Drainage from Catchments EXT3A-EXT7 will continue to drain through the Site and will be captured by the proposed storm sewer systems within the industrial blocks and conveyed through the Site to the proposed SWM facilities. It is noted that these external catchments are routed through the SWM facilities uncontrolled. Under existing conditions, runoff from Catchment EXT7 drained towards Airport Road, however under the proposed conditions, this runoff will be redirected to outlet to the East Tributary. Drainage from Catchment EXT8A will also drain through Wetland 1 only. Catchment EXT10 will remain unchanged and will continue to drain to the Mayfield Road culvert through the existing storm system within Mayfield Road, while Catchment EXT8B will also remain unchanged and continue to drain into the Site but will be directed towards Catchment 218.

Site Catchments 218 and 219 are located downstream of the SWM facilities and drain towards the East Tributary. Drainage from these catchments are not controlled post-development. Catchment 218 consists of the NHS/EPA, which serves to provide Regional floodplain storage as well as wetland compensation for the development. Catchment 219 remains undisturbed post-development. Controlled flows from both proposed SWM facilities will drain through these catchments prior to discharging to the East Tributary through the Mayfield Road culvert.

The Greenbelt area, represented as Catchment 200, will remain undisturbed and stormwater runoff from this catchment will continue to drain towards the West Tributary under proposed conditions. The total site area directed to the West Tributary is slightly reduced compared to pre-development conditions, therefore, it is proposed that the rooftops from Block 2 be redirected towards the Greenbelt to maintain pre-development condition flows to the West Tributary. Catchment 201 represents the assumed total future roof area for Block 2. Drainage from external Catchment EXT1 and EXT2 will remain unchanged following development and will continue to drain to the West Tributary.

Visual OTTHYMO was used to determine the post-development peak runoff directed to each outlet. The results of this modelling are summarized in the following tables. Per TRCA standards for the Humber River, return period peak stormwater flows based on both the 6-hour and 12-hour AES storm distributions have been modeled. Refer to Tables 10 and 11 for a summary of total Site post-development uncontrolled flows directed to each outlet during the 6-hour and 12-hour storms, respectively. Detailed Visual OTTHYMO model inputs and results are included in Appendix D.

Table 10: Post-Development Uncontrolled Runoff Summary (6-Hour Storm)

Storm Event (year)	Uncontrolled Peak Runoff Rates (m^3/s)						
	West Tributary			East Tributary			Salt Creek
	External Areas (Catchments EXT1 & EXT2)	Site Areas (Catchments 200 & 201)	Total	External Areas (Catchments EXT3B-EXT9)	Site Areas (Catchments 202-219)	Total	(Catchment 220)
2	0.047	0.455	**0.404**	0.412	10.974	**11.505**	0.174
5	0.080	0.784	**0.726**	0.658	15.502	**16.414**	0.308
10	0.105	1.032	**0.970**	0.843	18.627	**19.787**	0.405
25	0.139	1.364	**1.303**	1.092	22.540	**24.032**	0.532
50	0.164	1.625	**1.567**	1.280	25.764	**27.503**	0.631
100	0.191	1.894	**1.836**	1.480	28.696	**30.715**	0.732
Regional	0.269	3.552	**3.723**	1.819	23.130	**25.622**	1.062

Table 11: Post-Development Uncontrolled Runoff Summary (12-Hour Storm)

Storm Event (year)	Uncontrolled Peak Runoff Rates (m^3/s)						
	West Tributary			East Tributary			Salt Creek
	External Areas (Catchments EXT1 & EXT2)	Site Areas (Catchments 200 & 201)	Total	External Areas (Catchments EXT3B-EXT9)	Site Areas (Catchments 202-219)	Total	(Catchment 220)
2	0.040	0.432	**0.418**	0.326	7.280	**7.748**	0.178
5	0.063	0.710	**0.698**	0.498	9.797	**10.499**	0.285
10	0.080	0.915	**0.907**	0.619	11.534	**12.403**	0.361
25	0.102	1.185	**1.184**	0.780	13.794	**14.881**	0.458
50	0.119	1.394	**1.397**	0.901	15.407	**16.663**	0.531
100	0.136	1.610	**1.617**	1.023	17.018	**18.444**	0.604

Note that addition of the individual flows from the external and site areas do not exactly equal the total flows to each outlet shown in the above tables. These differences in peak flows occur because the total flows to each outlet were calculated in VO (accounting for time to peak values), whereas the total external and total site flows presented in the table above were calculated by manually adding the peak runoff rates from the individual catchments (i.e., without consideration of time to peak values when adding these peak flows together).

It is noted that no flows are proposed to outlet to Airport Road post-development.

5.3 Quantity Control for Salt Creek

Comparing results of the total runoff directed to Salt Creek has been reduced under the post-development conditions for all design storm events. In fact, a reduction of 16-17% is observed when comparing the results for the 2-year to Regional storm events, from both the 6-hour and 12-hour AES storm distributions. Peak flow controls are therefore not proposed for areas draining towards Salt Creek under the proposed development conditions. Refer to Table 12 for a summary of pre-development and post-development flows to Salt Creek.

Table 12: Flow Summary to Salt Creek

Storm Event	Pre-Development Results[1] (m^3/s)		Post-Development Results[1] (m^3/s)		Difference (m^3/s)		% Difference	
	6-Hour	12-hour	6-Hour	12-hour	6-Hour	12-hour	6-Hour	12-hour
2-year	0.209	0.213	0.174	0.178	-0.035	-0.035	-17	-16
5-year	0.367	0.343	0.308	0.285	-0.059	-0.058	-16	-17
10-year	0.484	0.435	0.405	0.361	-0.079	-0.074	-16	-17
25-year	0.637	0.552	0.532	0.458	-0.105	-0.094	-16	-17
50-year	0.755	0.641	0.631	0.531	-0.124	-0.110	-16	-17
100-year	0.873	0.73	0.732	0.604	-0.141	-0.126	-16	-17
Regional	1.287		1.062		-0.225		-17	

5.4 Quantity Control for the West Tributary

Catchments 200 and 201 represent drainage areas on Site directing runoff to the West Tributary under the proposed development conditions. Catchment 200 represents the Greenbelt area which will remain undisturbed by the proposed development. Catchment 201 represents the proposed rooftop compensation area which will be directed to the West Tributary to maintain surface water contributions to the West Tributary.

The rooftop area within Catchment 201 has been delineated to represent the minimum area required to provide balance for the volume of water directed to the West Tributary during the 25 mm event and will be further refined through the Site Plan Application stage. A detailed storm sewer layout directing the stormwater runoff from the rooftop to the Greenbelt area will also be completed as part of the future Site Plan Application for Block 2. The following subsections outline the proposed on-site control for flows directed to the West Tributary.

VO was used to assess the existing and proposed peak flows draining to the West Tributary. To maintain the pre-development volume directed to the West Tributary during the 25 mm event, to maintain surface flows to this feature, a minimum roof area of 0.92 ha must be redirected towards this feature. Peak uncontrolled runoff rates to the West Tributary are decreased for all storm events as a result when compared to existing conditions. In fact, a reduction of 14-15% is observed when comparing the results for the 2-year to Regional storm events, from both the 6-hour and 12-hour AES storm distributions. A summary of the total flows directed to the West Tributary is included in Table 13 for reference.

Table 13: Flow Summary to the West Tributary

Storm Event (year)	Pre-Development Results[1] (m^3/s)		Post-Development Results[1] (m^3/s)		Difference (m^3/s)		% Difference	
	6-Hour	12-hour	6-Hour	12-hour	6-Hour	12-hour	6-Hour	12-hour
2-year	0.469	0.485	0.404	0.418	-0.065	-0.067	-14	-14
5-year	0.851	0.817	0.726	0.698	-0.125	-0.119	-15	-15
10-year	1.141	1.065	0.97	0.907	-0.171	-0.158	-15	-15
25-year	1.534	1.392	1.303	1.184	-0.231	-0.208	-15	-15
50-year	1.843	1.644	1.567	1.397	-0.276	-0.247	-15	-15
100-year	2.158	1.904	1.836	1.617	-0.322	-0.287	-15	-15
Regional	4.307		3.723		-0.584		-14	

1. Includes uncontrolled flows from both internal and external catchments.

It is noted that the roof areas for all industrial blocks are not specified at the Draft Plan stage. As a result, a larger roof area may be directed to the West Tributary following development. Post-development peak flows to the West Tributary should be reviewed during the detailed design stage of Block 2. If flows to the West Tributary are increased post-development, storage requirements will need to be reviewed to ensure proper control is provided to ensure the pre-development flow rates to the West Tributary are not exceeded following development.

On-site storage options for Block 2, if required, may include rooftop storage and/or underground storage systems. Additional measures such as Low Impact Development (LID) techniques may also be explored to help reduce peak flows to the West Tributary and encourage infiltration of clean water through techniques like engineered wetlands or rain gardens.

Stormwater runoff from the building rooftop (Catchment 201) is considered inherently 'clean'. Catchments 200, EXT1 and EXT2 remain unaltered post-development, consisting of only natural Greenbelt areas, which are also considered to be inherently 'clean'. Therefore, no additional water quality controls are proposed for runoff directed towards the West Tributary.

5.5 Stormwater Management for the East Tributary

As can be seen in Figure 4, most of the site will drain to the East Tributary. The results of the VO model show a significant increase in peak flows to the East Tributary if the site is allowed to drain uncontrolled. As such quantity control will be required for most of the site. The following sections describe the proposed stormwater management for discharge to the East Tributary.

5.6 Quantity Control Within Blocks

Catchments 202, 205, 206, 208, 210, 212, 214 and 215 all represent drainage areas within the various Blocks proposed on-site. These catchments have been delineated based on their connection to the proposed internal storm sewer system. One (1) storm sewer connection is provided for each individual Block. Detailed storm sewer layouts internal to each of the development Blocks will be completed as part of future Site Plan Applications. The following subsections discuss the Block-level controls required on Site.

The Town of Caledon standards require the internal storm sewers on Site (including within the ROWs) to be designed to convey runoff from the 5-year design storm event. Therefore, Block-level controls

are proposed to control 100-year post-development peak flows to the 5-year post-development peak flows, prior to discharging to the proposed storm sewer system within the ROWs.

VO was used to determine the target Block-level peak runoff and required storage volume to control the 100-year peak runoff rates to the 5-year runoff rates. As required in TRCA standards for the Humber River, the return period peak flows were modeled based on both the 6-hour and 12-hour AES storm distributions.

Table 14 summarizes the peak flow targets for each catchment and the associated storage requirement. Review of the model output indicates that the 12-hour storm results in a smaller flow target than the 6-hour storm; therefore, the 5-year peak flows under the 12-hour storm event were set as the target peak flow for each Block for both storm distributions to ensure consistency in peak flow targets during modeling. Appendix D contains the VO model inputs and results for both the 6-hour and 12-hour design storms.

Table 14: Summary of Block-Level Peak Stormwater Flow Rates and Storage Requirements

Catchment ID	Block ID	5-Year Target Flow (m^3/s)	6-Hour Storm		12-Hour Storm	
			100-Yr Controlled Flow Rate (m^3/s)	Storage Volume Required (m^3)	100-Yr Controlled Flow Rate (m^3/s)	Storage Volume Required (m^3)
202	7	1.138	1.137	7,094	1.137	5,449
205	8	1.091	1.090	6,769	1.090	5,208
206	3	1.245	1.242	7,938	1.242	6,126
208	4	1.157	1.154	7,388	1.154	5,698
210	1	2.202	2.198	14,169	2.197	10,956
212	5	1.123	1.121	6,936	1.120	5,339
214	2	0.608	0.606	3,754	0.607	2,907
215	6	0.251	0.250	1,516	0.250	1,199

The storage volumes indicated in Table 14 have been provided for modelling purposes to properly size the downstream storm sewers and SWM pond. The 6-hour storm event produces the larger storage volume requirements, compared to the 12-hour storm event, therefore the storage volumes shall be governed by the larger 6-hour event.

Storage volume requirements and peak flow controls will need to be reviewed and refined at the Site Plan Application stage to meet the 5-year peak flow targets indicated in Table 14. Storage options may include rooftop storage, at-grade ponding, and/or underground storage systems. Additional measures such as LID techniques may also be explored.

Emergency overland flow routes for the Blocks are designed to direct stormwater runoff above the 100-year event towards the municipal ROWs proposed within the Site, which convey these flows overland to the proposed southmost SWM facility (Wetland 2). Refer to Section 5.7 for more information regarding the design of the SWM facilities.

5.7 Stormwater Management (SWM) Facility Design

Two (2) stormwater management facilities are proposed in the form of wetlands to provide stormwater quantity, quality, and erosion controls for the overall development. Stormwater flows will enter the proposed SWM facilities primarily through the proposed internal storm sewer system (minor system) and by overland flow (major system) as described further in Section 5.8.

The following subsections provide details regarding the SWM facilities proposed on Site.

5.7.1 Grading and Design Considerations

The stormwater management wetlands shall be designed with consideration for grading, public safety, future maintenance access, and safe conveyance of emergency flows. Both stormwater management facilities discussed within this report include the following features:

- Site grading to provide safe overland conveyance of flows exceeding the capacity of the storm sewer system to the southmost stormwater management facility (Wetland 2);
- The Wetlands will be graded with a maximum of 5:1 side slope for 3.0 m above and below the permanent pool and maximum 3:1 everywhere else within the wetland perimeter as per MECP Guidelines. A consistent grading of 4:1 will be provided from the top of both wetlands/access road to the bottom of the environmental protection area/NHS. Additional erosion protection measures for the 4:1 slope within the environmental protection area will be provided at detailed design stage;
- Permanent pool volume is sized as per the MECP Manual (to provide Enhanced Level quality Protection) with a depth of 1.5 m in the forebays and 0.3 m in the main cells for both wetlands 1 & 2;
- Extended detention storage and drawdown provided at a maximum depth of 1.5 m per MECP guidelines;
- Active storage sized per the requirements in the Subwatershed Management Study to meet Unitary Flow Rates for the Humber River Watershed (Sub-Basin 36);
- A minimum 0.30 m of freeboard provided above the 100-year water level or highest water level within the facility;
- Emergency spillway sized to convey unattenuated Regulatory storm event runoff (greater of the Regional or 100-year unattenuated flow). Sizing calculations of emergency spillways to be provided at detailed design stage;
- A 5.0 m wide maintenance access road will be located at the top of the wetlands, at 0.3 m above the highest water level with maximum longitudinal slopes of 8.0% and a maximum cross-fall slope of 2.0%. The access road will facilitate access to the forebays and outlet structures for maintenance. Additionally, the access roads will loop and connect both wetlands with three (3) entrances fronting Street B.
- Sediment drying areas are provided within the SWM blocks, adjacent to the forebay of Wetland 1 and adjacent to the main cell and Street B for Wetland 2 to facilitate maintenance of the facilities.

Refer to preliminary stormwater management design drawings enclosed with this report as Drawings C103 to C103B.

5.7.2 Quantity Control

Unit flow relationships have been established by the TRCA for all areas located within the Humber River Watershed, not discharging to the main branches of the Humber River. Table 15 summarizes the unit flow rate equations for the subject site, which is contained within Sub-Basin 36 of the Humber River as per the Humber River Stormwater Management Quantity Control Release Rates map included in Appendix C. The allowable release rates for the wetlands were calculated based on a total Site drainage area directed to each stormwater management facility proposed on the property. Wetland 1 has a total site drainage area of 81.10 ha, including half of Catchments 202-211, which are directed towards the facility through a proposed flow splitter, and Catchments 212-213. Wetland 2 has a total site drainage area of 78.78 ha, including half of Catchments 202-211, which are directed towards the facility through a proposed flow splitter, and Catchments 214-217.

Table 15: Summary of Unit Flow Relationships for the Site

Storm Event (year)	**Unit Flow Equations (Sub-Basin 36)**	**Wetland 1 Allowable Release Rate** (m^3/s)	**Wetland 2 Allowable Release Rate** (m^3/s)
2	Q = 9.506 – 0.719 * ln (A)	0.515	0.502
5	Q = 14.652 – 1.136 * ln (A)	0.783	0.763
10	Q = 17.957 – 1.373 * ln (A)	0.967	0.942
25	Q = 22.639 – 1.741 * ln (A)	1.215	1.185
50	Q = 26.566 – 2.082 * ln (A)	1.412	1.377
100	Q = 29.912 – 2.316 * ln (A)	1.600	1.560

Notes: Q = unit flow (L/s/ha), A = area (ha)
Source: Stormwater Management Criteria prepared by TRCA (August 2012)

Stormwater quantity control is only required for the Site. Several external catchment areas, Catchments EXT3A-EXT8A, will be conveyed through the site and similarly, conveyed through the SWM facilities. Drainage from Catchments EXT3A-EXT7 will be captured by the proposed storm sewer systems within the industrial blocks and conveyed through the Site to the proposed SWM facilities through a flow splitter. Drainage from Catchment EXT8A will sheet flow directly into Wetland 1.

As such, the allowable release rates from the wetland have been increased accordingly, to allow half of the external drainage areas from Catchments EXT3A-EXT7 and Catchment EXT8A to be conveyed uncontrolled through Wetland 1 and to allow half of the external drainage areas from Catchments EXT3A-EXT7 to be conveyed uncontrolled through Wetland 2. A summary of the overall target release rates from the SWM facilities, considering the flows from the external catchments added to the TRCA allowable release rates, are summarized in Tables 16 and 17.

Table 16: Stormwater Management Facility Target Release Rates for Wetland 1

Storm Event (year)	TRCA Allowable Release Rate (m^3/s)	Total Uncontrolled External Flow[1] (m^3/s)		Total Target Release Rate for SWM Wetland (m^3/s)	
		6-Hour	12-Hour	6-Hour	12-Hour
2	0.515	0.176	0.142	0.691	0.657
5	0.783	0.284	0.219	1.067	1.002
10	0.967	0.367	0.273	1.334	1.239
25	1.215	0.477	0.345	1.692	1.560
50	1.412	0.562	0.398	1.974	1.810
100	1.600	0.650	0.452	2.250	2.052

1. Sum of half of Catchments EXT3A-EXT7 Uncontrolled + Catchment EXT8A Uncontrolled

Table 17: Stormwater Management Facility Target Release Rates for Wetland 2

Storm Event (year)	TRCA Allowable Release Rate (m^3/s)	Total Uncontrolled External Flow[1] (m^3/s)		Total Target Release Rate for SWM Wetland (m^3/s)	
		6-Hour	12-Hour	6-Hour	12-Hour
2	0.515	0.155	0.128	0.657	0.630
5	0.783	0.253	0.199	1.016	0.962
10	0.967	0.328	0.249	1.270	1.191
25	1.215	0.429	0.315	1.164	1.499
50	1.412	0.505	0.365	1.881	1.741
100	1.600	0.586	0.415	2.145	1.975

1. Sum of half of Catchments EXT3A-EXT7 Uncontrolled

Based on the determined target release rates, Visual Otthymo (VO) modeling software was used to determine the required storage volumes for the wetlands to control the post development peak flows to the allowable release rates for the 2-year to 100-year design storm events. As required by the TRCA standards for the Humber River, Crozier modelled the return period peak stormwater flows based on the 6-hour and 12-hour AES storm distribution.

Table 18 summarizes the post development peak flow targets for Wetland 1 and the associated required storage. Appendix D contains the Visual OTTHYMO model inputs and results.

Table 18: Summary of SWM Facilities Peak Flows and Storage Volumes for Wetland 1

Design Storm Event (year)	6-Hour Design Storm				12-Hour Design Storm			
	Wetland Allowable Release Rate[1] (m^3/s)	Wetland Controlled Flow Rate (m^3/s)	Storage Volume (m^3)	Water Level in Pond (masl)	Wetland Allowable Release Rate[1] (m^3/s)	Wetland Controlled Flow Rate (m^3/s)	Storage Volume (m^3)	Water Level in Pond (masl)
2	0.691	0.299	21,005	233.35	0.657	0.429	23,632	233.43
5	1.067	0.652	26,402	233.58	1.002	0.831	28,619	233.62
10	1.334	0.911	29,608	233.61	1.239	1.065	31,957	233.72
25	1.692	1.178	33,819	233.80	1.560	1.334	36,388	233.87
50	1.974	1.376	37,087	233.89	1.810	1.598	39,513	233.97
100	2.250	1.652	40,063	233.99	2.052	1.882	42,394	234.07

1. Wetland allowable release rate per Tables 17
2. Total active storage provided in Wetland 1 is 55,696 m^3

As shown in Table 18, the storage requirements for all design storm events (2-year to 100-year storms) are dictated by the 12-hour design storm. The maximum required storage volume for the SWM facility occurs during the 100-year storm event, requiring 42,394 m^3.

The proposed wetland provides 55,696 m^3 of active storage between the permanent pool water level (232.50 m) and the emergency spillway elevation (234.50 m), therefore providing sufficient volume to accommodate quantity control requirements. During the 100-year storm event, the maximum ponding level within Wetland 1 is 234.07 m, providing 0.73 m of freeboard from the top of Wetland at 234.80 m.

Table 19 summarizes the post development peak flow targets for Wetland 2 and the associated required storage. Appendix D contains the Visual OTTHYMO model inputs and results.

Table 19: Summary of SWM Facility Peak Flows and Storage Volumes for Wetland 2

Design Storm Event (year)	6-Hour Design Storm				12-Hour Design Storm			
	Wetland Allowable Release Rate[1] (m^3/s)	**Wetland Controlled Flow Rate** (m^3/s)	**Storage Volume** (m^3)	**Water Level in Wetland** (masl)	**Wetland Allowable Release Rate[1]** (m^3/s)	**Wetland Controlled Flow Rate** (m^3/s)	**Storage Volume** (m^3)	**Water Level in Wetland** (masl)
2	0.657	0.234	20,964	231.75	0.630	0.349	23,581	231.77
5	1.016	0.502	26,697	231.92	0.962	0.675	29,060	232.01
10	1.270	0.747	30,042	232.05	1.191	0.918	32,385	232.09
25	1.614	1.043	34,106	232.15	1.499	1.196	36,598	232.26
50	1.881	1.235	37,245	232.28	1.741	1.392	39,804	232.35
100	2.145	1.428	40,380	232.36	1.975	1.618	42,982	232.43

1. Wetland allowable release rate per Table 18
2. Total active storage provided in Wetland 2 is 61,873 m^3

As shown in Table 19, the storage requirements for all design storm events (2-year to 100-year storms) are dictated by the 12-hour design storm. The maximum required storage volume for the SWM Wetland occurs during the 100-year storm event, requiring 42,982 m^3.

The proposed Wetland provides 61,873 m^3 of active storage between the permanent pool water level (231.00 m) and the emergency spillway elevation (233.00 m), therefore providing sufficient volume to accommodate quantity control requirements. During the 100-year storm event, the maximum ponding level within Wetland 2 is 232.43 m, providing 0.97 m of freeboard from the top of wetland at 233.40 m.

5.7.3 Regional Analysis

An analysis of the regional floodplain is provided in the *East Tributary – Hydraulic Analysis Report* prepared by Crozier (April 2023). Based on the conclusions of the hydraulic analysis for the Site, an area for floodplain storage has been included within the Natural Heritage System (NHS) / Environmental Protection Area (EPA) located downstream of the wetland facilities. A total flood storage volume of 26,000 m^3 was deemed required per the hydraulic analysis under existing conditions. A total storage volume of 26,942 m^3 is provided at a 1.0 m depth, which is sufficient to store the existing flood volume. An area of 3.01 ha from the total 4.26 ha NHS/EPA is used for flood storage. This area may be adjusted to provide some reduction in the regional flows from the Site and will be modeled in more detail at detailed design. Refer to the *East Tributary – Hydraulic Analysis Report* prepared by Crozier (April 2023) for more details.

5.7.4 Quality Control

Stormwater quality controls for the Site must incorporate measures to provide "Enhanced" Level Protection per the MECP (2003) guidelines. "Enhanced" water quality protection involves the removal of at least 80% of the Total Suspended Solids (TSS) from 90% of the annual runoff volume.

The proposed SWM facilities have been designed with a permanent pool volume sized to achieve 80% TSS removal per MECP guidelines. All minor system drainage from the proposed development will be treated in the proposed wetland facilities. Wetland 1 has a total site drainage area of 81.10 ha, including half of Catchments 202-211, which are directed towards the facility through a proposed flow splitter, and Catchments 212-213, with an approximate 90% imperviousness. Wetland 2 has a total site drainage area of 78.78 ha, including half of Catchments 202-211, which are directed towards the facility through a proposed flow splitter, and Catchments 214-217, also with an approximate 90% imperviousness.

The required permanent pool volume to meet the quality control criteria from Table 3.2 of the MECP Stormwater Management Planning and Design Manual (2003) is summarized in Table 20.

Table 20: SWM Facilities Water Quality Requirements

SWM Facility	Total Contributing Drainage Area (ha)	Percent Imperviousness of Drainage Area	Required Permanent Pool Storage Volume (m^3/ha)	Required Permanent Pool Storage Volume (m^3)	Provided Permanent Pool Storage Volume (m^3)
Wetland 1	81.10	90%	109	8,844	10,865
Wetland 2	78.78	90%	109	8,591	11,073

Note: The required storage volumes are interpolated from Table 3.2 of MECP SWM Planning and Design Manual (2003) based on upstream impervious area.

Wetland 1 provides 10,865 m^3 of permanent pool volume between the bottom of the wetland (elevation 231.00 m) and the permanent pool water level (232.50 m) while Wetland 2 provides 11,073 m^3 of permanent pool volume between the bottom of the wetland (elevation 229.50 m) and the permanent pool water level (231.00 m). Therefore, the provided permanent pool volume design for each SWM facility meets the MECP requirements to achieve 80% TSS removal.

Forebay Sizing

The forebay has been designed to provide forebay lengths that meet the required dispersion and settling lengths in accordance with water quality sizing objectives from Section 4.6.2 of the MECP Planning & Design Manual (2003). A summary of the forebay sizing calculations is provided in Table 21, and detailed calculations are provided in Appendix D.

Table 21: SWM Facility Forebay Sizing Summary

Parameter	Wetland 1		Wetland 2	
	Required Size (m)	Provided Size (m)	Required Size (m)	Provided Size (m)
Minimum Forebay Length for Settling (V^S = 0.0003 m/s)	26	105	31	110
Minimum Dispersion Length	32		31	
Minimum Bottom Width	4	48	3.8	37

Wetland 1 has been designed with a sediment forebay that is approximately 105 m in length, and 48 m in width. The sediment forebay comprises approximately 19% of the total permanent pool

area. The forebay is separated from the main cell of the wetland by a berm with a top elevation of 232.80 m, set 0.30 m above the normal water level. The berm includes a 21 m wide trapezoidal weir with 3:1 side slope that serves as a spillway between the forebay and the main cell of the wetland. The spillway invert is located at the normal water level (232.50 m) per Town of Caledon standards. Conveyance of the 25 mm uncontrolled flow through the proposed spillway was modelled in FlowMaster, resulting in a flow depth of 0.30 m through the spillway.

Wetland 2 has been designed with a sediment forebay that is approximately 110 m in length, and 37 m in width. The sediment forebay comprises approximately 15% of the total permanent pool area. The forebay is separated from the main cell of the wetland by a berm with a top elevation of 231.30 m, set 0.30 m above the normal water level. The berm includes a 20 m wide trapezoidal weir with 3:1 side slope that serves as a spillway between the forebay and the main cell of the wetland. The spillway invert is located at the normal water level (231.00) per Town of Caledon standards. Conveyance of the 25 mm uncontrolled flow through the proposed spillway was modelled in FlowMaster, resulting in a flow depth of 0.30 m through the spillway.

Refer to Appendix D for the FlowMaster model outputs. The spillways will be protected by cable concrete to stabilize the slope against erosion.

Major system flows, other than those captured by the Block-level controls, will bypass the forebay and enter the main cell of Wetland 2. This will increase the effectiveness of the SWM facility in providing quality control as larger flows will not re-suspend sediment that has settled in the forebay.

Thermal Mitigation

Tributaries of the Humber River flowing through the Site have been identified as habitat or contributing area for Redside Dace. As such, the Guidance for Development Activities in Redside Dace Protected Habitat Version 1.2 (MNRF, March 2016) needs to be followed. Per their standard, the Ministry of Natural Resources and Forestry requires thermal mitigation for effluent from SWM facilities directed to Redside Dace habitats to be reduced to a temperature of 24°C.

Thermal mitigation of runoff from the proposed development will be provided by the SWM facilities, which have been designed as wetlands. The wetlands are designed with a bottom draw outlet which will capture the cooler water found below the water surface to reduce the temperature loading to the channel. The wetlands will also have ample vegetation, providing shade over the facilities, which reduces heating of sitting water.

5.7.5 Erosion Control Measures

The design of the SWM facilities includes extended detention volume control as well as surface treatment measures to reduce the risk of erosion at the wetland berms, receiving watercourse, and near the existing Mayfield Road culvert.

Extended Detention Drawdown Time

The SWM facilities have been designed to detain runoff from the 25 mm design storm event, and the extended detention orifices within the outlet structures has been designed to release this volume over a minimum period of 48 hours.

Per the VO model prepared for the site, the total runoff depth directed to Wetland 1 during the 25 mm event is 19.70 mm. Given the total drainage area directed to Wetland 1 (81.10 ha), this results in a total extended detention volume requirement of 15,979 m^3. The proposed wetland provides this detention volume at a water level of 233.15 m. The total runoff depth directed

to Wetland 2 during the 25 mm event is 19.61 mm. Given the total drainage area directed to Wetland 2 (78.78 ha), this results in a total extended detention volume requirement of 15,446 m^3. The proposed wetland provides this detention volume at a water level of approximately 231.60 m.

An extended detention orifice has been designed to slowly release runoff volume from the 25 mm design storm event over a minimum period of 48-hours for each SWM facility. A 250 mm diameter orifice is proposed within the outlet structures at an invert elevation of 232.50 m and 231.00 m (permanent pool elevation) for Wetland 1 and Wetland 2, respectively.

The top of extended detention for Wetland 1 is at an elevation of 233.15 m, resulting in a provided extended detention volume of 16,057 m^3. Given the total maximum head of 0.65 m acting on the orifice during the 25 mm event, MECP Equation 4.10 (Stormwater Management Planning and Design Manual, March 2003) was used to determine that the total extended detention volume is released over a period of 70-hours.

The top of extended detention for Wetland 2 is at an elevation of 231.60 m, resulting in a provided extended detention volume of 16,894 m^3. Given the total maximum head of 0.60 m acting on the orifice during the 25 mm event, it was determined that the total extended detention volume is released over a period of 75-hours.

Refer to the calculations included in Appendix D for more details.

Concrete Cable Mat Erosion Mitigation

Concrete cable mat is proposed as an erosion treatment at wetland inlets, wetland outlets, overland spillways, forebay berms, and emergency spillways. Minor system flows enter the SWM facilities forebay through a storm sewer connection. Major system (overland) flows enter the Wetland 2 at the west end of the main cell via the major overland flow route. At each inlet location, as well as the forebay berms, emergency spillways, and wetland outfalls, cable concrete mat is proposed to resist the tractive force of the unattenuated Regulatory storm event (greater of the 100-year or Regional flow). The cable concrete will be sized by the manufacturer prior to approval.

5.7.6 Stormwater Management Facilities Outlet Structures

Preliminary sizing for the outlet for the SWM facilities was completed as part of this submission. The outlet structure for Wetland 1 is proposed in the southwest corner of its main cell, while the outlet structure for Wetland 2 is in the northeast corner of its main cell. The outlets for both wetlands will connect to one common manhole proposed within the access road for the facilities and will outlet to the NHS area through one headwall located at the west end of the NHS area. Flows will then be directed southeast through the NHS area towards another outlet, which will be designed at the detailed design stage, directing flows to a 105.5 m long natural channel at a slope of 0.84%, which directs storm flows towards the existing Mayfield culvert.

The outlet control manhole for both SWM facilities, which will be detailed further at the detailed design stage, will include three orifice controls. A 250 mm diameter circular orifice with its invert set at the normal water level (232.50 m and 231.00 m for Wetland 1 and Wetland 2, respectively) will provide extended detention control.

For Wetland 1, a second orifice control, comprising of a 1,200 mm (W) by 500 mm (H) rectangular orifice, will be installed at an invert of 233.15 m (top of extended detention water elevation). The combination of the first two orifice controls will control the 2-year through 10-year storm events to the quantity control target release rates indicated in Table 19. A third orifice control, comprising of

a 1,500 mm (W) by 500 mm (H) rectangular orifice, will be installed at an invert of 233.80 m. The combination of all noted orifice controls will control the 25-year through 100-year storm events to the quantity control target release rates indicated in Table 19.

For Wetland 2, a second orifice control, comprising of a 1,200 mm (W) by 500 mm (H) rectangular orifice, will be installed at an invert of 231.60 m (top of extended detention water elevation). The combination of the first two orifice controls will control the 2-year through 10-year storm events to the quantity control target release rates indicated in Table 20. A third orifice control, comprising of a 1,500 mm (W) by 500 mm (H) rectangular orifice, will be installed at an invert of 232.25 m. The combination of all noted orifice controls will control the 25-year through 100-year storm events to the quantity control target release rates indicated in Table 20.

Detailed orifice control calculations and SSD table for the SWM facilities are provided in Appendix D.

5.7.7 Emergency Spillway

In the event of a storm exceeding the 100-year event or a blockage of the outlet structure, an emergency spillway has been designed to safely convey runoff from the uncontrolled Regulatory event (greater of 100-year and Regional events) through the SWM facilities to the NHS/EPA area. Given the size of the proposed storm sewers within Street B, blockage of the storm sewer system during the 100-year storm is highly unlikely therefore, the 100-year storm flows considered through the emergency spillway assumes that only the wetland outlet is plugged (flow splitter is functioning and the block-level controls remain in place). Under the emergency overland flow situation (Regional storm), runoff from all blocks and ROWs are directed to Wetland 2 therefore, Wetland 1 only receives flows falling on the wetland itself and drainage from Catchment EXT8A. It is noted that block controls are assumed to fail under the Regional storm event.

The 100-year flows to Wetland 1 are 5.39 m^3/s and 5.30 m^3/s for the 6-hour and 12-hour AES storm distributions, respectively, as per the VO model output. The Regional uncontrolled flow directed towards Wetland 1 is only 0.67 m^3/s since all major overland flows are directed to Wetland 2. The maximum anticipated flow was used to size the emergency spillway (5.39 m^3/s). The spillway is located on the southeast bank of the wetland, just west of the property line, and has been sized as a 25 m wide trapezoidal weir with 3:1 side slope to convey the Regulatory flow with 0.04 m of freeboard to the top of the wetland.

The 100-year flows to Wetland 2 are 5.23 m^3/s and 5.16 m^3/s for the 6-hour and 12-hour AES storm distributions, respectively, as per the VO model output. The Regional uncontrolled flow directed towards Wetland 2 is 23.34 m^3/s. The maximum anticipated flow was used to size the emergency spillway (23.34 m^3/s). The spillway is located on the northern bank of the wetland, west of the NHS/EPA block, and has been sized as a 70 m wide trapezoidal weir with 3:1 side slope to convey the Regulatory flow with 0.04 m of freeboard to the top of the wetland.

Detailed emergency spillway calculations are provided in Appendix D.

5.8 Stormwater Conveyance Systems

The Rational Method was used to preliminarily size the proposed storm sewer system within the Site. Street B represents the main emergency overland flow route for the Site, directing all runoff towards the southmost SWM facility (Wetland 2) proposed in the southeast corner of the subject property during the Regional storm event. All development blocks are also proposed to outlet to the storm sewer system within Street B. The development block flows were added to the design sheet as constant flows according to their respective allowable release rates.

5.8.1 Minor Storm Sewer System Conveyance

The storm sewers on Site have been preliminarily designed to convey the 5-year design storm event to each SWM facility. The storm sewer system has been designed with a flow splitter manhole, which will split flow from Catchments 202-211 (Blocks 1, 3, 4, 7 and 8 and the ROWs north of the flow splitter manhole) equally between the two proposed SWM facilities. Storm flows from Block 5 will be directed to the northmost SWM facility (Wetland 1), while the remainder of the Site (Blocks 2 and 6 and the ROW south of the flow splitter manhole) will be directed to the southmost SWM facility (Wetland 2).

It is noted that the 100-year storm flows from all development blocks are controlled to the 5-year storm event. The allowable release rate from each block was applied as a constant flow rate while sizing the storm sewer system.

Refer to the 5-year Rational Method storm sewer sizing results provided within Appendix D for further details and Drawings C101 and C101A**.** As part of the detailed design phase, a dynamic dual drainage model will be prepared to further design the minor storm system.

5.8.2 Major Storm System Conveyance

Flows that are greater than the minor storm sewer system capacity will drain overland via the proposed ROWs towards Wetland 2. A low point is proposed along Street B, which will direct overland runoff into the main cell of this SWM facility. As part of the detailed design phase, a dynamic dual drainage model will be prepared to quantify the proposed major storm conveyance to Wetland 2.

5.9 Water Balance

Per the CLI-ECA stormwater criteria, a water balance analysis is required for the public lands using the average and more frequent precipitation events that comprise of the bulk volume of annual precipitation to ensure maintenance of pre-development water balance following development. The same is required for the private blocks on Site, which will each go through an ECA at the Site Plan Application stage. Refer to Figure 5 for more information on the areas that will be private versus public following development of the subject property.

Water balance calculations were completed using the Thornthwaite and Mather Method (1957). The Thornthwaite and Mather water balance is an accounting type method to analyze the allocation of water among various components of the hydrologic cycle. Inputs to the model include monthly temperature, site latitude, precipitation, and stormwater run-on. The Woodbridge Weather Station was chosen as the most representative database for the Site. The most recent 30-year normal (average weather data) available from Environment Canada covers the period from January 1981 to December 2010.

A Preliminary Hydrogeological Investigation is provided under separate cover by Toronto Inspections (June 30, 2021). The results of the investigation show that wells located near drainage features have groundwater at depths between 0.9 to 2.46 m below ground surface while wells in locations further removed from the drainage features reported groundwater elevations at depths ranging between 3.19 m to 5.87 m below ground surface. A long-term groundwater level monitoring program is currently underway on Site to capture the seasonal fluctuations and determine the high groundwater level for the property. In addition to groundwater elevations, the investigation also includes hydraulic response testing to determine the hydraulic conductivity of soils on Site. According to the estimates completed by Toronto Inspection, the hydraulic conductivity of the materials on site ranges from 1.5×10^{-9} m/s and 3.7×10^{-7} m/s, with a geometric mean

of 6.8 x 10^{-9} m/s. This results in an infiltration rate of approximately 3.55 mm/hr. The results of the hydrogeological investigation will help inform the potential for LID implementation on Site to achieve both the feature-base and site-specific water balance requirement.

The water balance for the Site was completed to set the targets for the private and public blocks separately. The private part of the Site includes Block 1-8, consisting of a total area of about 147 ha. The private industrial blocks will be required to go through an ECA at the Site Plan Application stage. The private blocks are determined to create an infiltration deficit of 168,316 m^3/year. A summary of the private block water balance is provided in Table 22. Refer to Appendix D for the water balance calculations.

Table 22: Summary of Water Balance (Private Blocks 1-8)

Scenario	Precipitation (m^3/yr)	Evapotranspiration (m^3/yr)	Infiltration (m^3/yr)	Runoff (m^3/yr)
Pre-Development	1,139,669	654,475	189,047	296,146
Post-Development[1]	1,139,669	274,707	20,730	844,231
Change (Pre to Post)	**0%**	**-58%**	**-89%**	**285%**

1. Post-development with no mitigation, assuming 10% landscaping for industrial blocks per standard minimum requirements

To achieve the private block infiltration water balance, the infiltration deficit will be mitigated through measures within each of the industrial blocks (Blocks 1-8). It is noted that there are no current plans to develop Block 10 therefore, the water balance for this block is achieved as the total pervious area is maintained post-development. Targets for each of the industrial blocks have been set according to their relative total area. Refer to Table 23 for the infiltration target for each block.

Table 23: Summary of Infiltration Water Balance Target for the Industrial Blocks

Block ID	Area (ha)	Infiltration Target (m^3/year)
1	36.409	42,265
2	11.844	13,749
3	21.191	24,599
4	18.796	21,819
5	17.455	20,262
6	3.907	4,535
7	18.162	21,083
8	17.232	20,004
Total	**144.996**	**168,316**

To mitigate the infiltration deficit for the blocks, it was assumed that a combination of rooftop and surface parking drainage from each of the private development blocks could be directed to Low Impact Development (LID) measures designed to promote infiltration. Based on this assumption we have estimated that an infiltration target of 4.3 mm of rainfall is required to match the pre-development infiltration rates for each respective block, except for Block 2, which is required to infiltrate 5.2 mm of rainfall to achieve the target. The 4.3 mm design storm was determined assuming 90% of the impervious area for the industrial blocks will be directed to infiltration facilities. As previously mentioned, a minimum roof area of 0.92 ha within Block 2 is to be redirected to the Greenbelt to maintain the existing flows within the West Tributary post-development, resulting in the larger rainfall event required to achieve the infiltration water balance. It is noted that pre-treatment will be required for any surface runoff directed to the infiltration facilities. The depth of rainfall to be infiltrated shall be reviewed at the site plan stage based on the landscape design and total area available for surface ponding. Refer to Appendix D for the water balance calculations.

Detailed infiltration facility sizing, including in-situ percolation tests and drawdown calculations for each facility will be completed as part of the detailed design for each Site Plan, however, to maintain existing infiltration levels, it is recommended that LIDs be included in the stormwater management design to promote infiltration. As such, a list of feasible LID options is presented in Table 24 for consideration at the site plan stage.

Table 24: LID Options Feasibility Summary

LID Option	Comments	Feasible Y/N	Rationale
Green Roof	- Retains stormwater to reduce runoff - Does not recharge groundwater	Y	- Commercial/industrial development will include large buildings with flat roof areas conducive for green roof installations.
Roof Downspout Disconnection	- Improves groundwater recharge by directing runoff from impervious roofs to landscaped areas	N	- Commercial/industrial development will include large buildings, however there is not sufficient landscape area available near each building to support downspout disconnection.
Infiltration Galleries	- Improves groundwater recharge	Y	- High groundwater and tight soils may limit feasible locations for infiltration galleries, feasibility to be confirmed at the site plan stage. - It is preferred to direct 'clean' roof runoff into infiltration galleries. -If parking/asphalt areas will be directed to infiltration galleries, quality treatment of runoff will be required to treat runoff prior to entering the infiltration gallery.
Rainwater Harvesting	- Retains stormwater to reduce runoff - Allows infiltration when used for irrigation of landscaped areas	Y	-Runoff from commercial/industrial rooftops could feasibly be directed to a rainwater cistern and used for irrigation of landscaped areas on-site. Feasibility to be confirmed at Site Plan stage.
Bioretention	- Improves groundwater recharge	N	- Commercial/industrial development will comprise mainly of buildings and parking lot areas, with limited landscaping, therefore there is not sufficient landscape area to support bioretention features. - It is preferred to direct 'clean' roof runoff into vegetated filter strips. -If parking/asphalt areas will be directed to vegetated filter strip, quality treatment of runoff will be required to treat runoff prior to entering the bioretention facility.
Vegetated Filter Strips	- Reduces stormwater runoff - Improves groundwater recharge	N	- Commercial/industrial development will comprise mainly of building and parking lot areas, with limited landscaping, therefore there is not

			sufficient landscape area available to support vegetated filter strip features. - It is preferred to direct 'clean' roof runoff into vegetated filter strips. -If parking/asphalt areas will be directed to vegetated filter strip, quality treatment of runoff will be required to treat runoff prior to entering the vegetated filter strip.
Permeable Pavement	- Reduces stormwater runoff - Improves groundwater recharge	Y	- Parking lots and drive aisles could feasibly be converted to permeable pavement to reduce runoff and promote infiltration. Feasibility to be confirmed at site plan stage.
Enhanced Grass Swales	- Reduces stormwater runoff - Improves groundwater recharge	N	- Commercial/industrial development will comprise mainly of building and parking lot areas, with limited landscaping, therefore there is not sufficient landscape area available to support enhanced grassed swale features.

As noted above, feasible options can be further investigated at the detailed site plan stage, to meet the private block water balance deficit.

The remainder of the Site will be conveyed to the Town post-development and will therefore consist of public land, which are to be reviewed under the Town's CLI-ECA Stormwater Criteria. The water balance for the public land is proposed to be provided completely within the future ROWs on the property. The public blocks are determined to create an infiltration deficit of 8,993 m^3/year. A summary of the public blocks water balance is provided in Table 25. Refer to Appendix D for the water balance calculations.

Table 25: Summary of Water Balance (Public Blocks)

Scenario	Precipitation (m^3/yr)	Evapotranspiration (m^3/yr)	Infiltration (m^3/yr)	Runoff (m^3/yr)
Pre-Development	438,454	253,459	73,470	111,525
Post-Development[1]	438,454	233,168	64,477	140,809
Change (Pre to Post)	**0%**	**-8%**	**-12%**	**26%**

1. Post-development with no mitigation, assuming 27% landscaping for the ROWs per standard minimum requirements

To mitigate the infiltration deficit for the public lands, it was determined that surface runoff from the entire ROWs can be directed to LID measures designed to promote infiltration. Drainage from all impervious surfaces within the ROWs directed towards infiltration facilities sized to capture and infiltrate 3.5 mm of rainfall is required to achieve the infiltration target. It is noted that pre-treatment will be required for any surface runoff directed to the infiltration facilities. Refer to Appendix D for the water balance calculations.

There are several LID measures that could be installed within the ROWs to meet the water balance target. Examples of suitable LIDs include bioswales, enhanced swales, exfiltration trenches, boulevard bioretention and permeable pavements for the sidewalks. Detailed facility sizing, including in-situ percolation tests and drawdown calculations for each facility will be completed as part of detailed design.

6.0 Conclusions and Recommendations

We conclude that proposed development of the subject property can be readily serviced from a civil engineering and stormwater management perspective. The proposed civil engineering servicing and stormwater management design outlined in this report can meet the objectives of the regulatory agencies.

Based on the information contained in this report, we offer the following conclusions:

1. The sanitary servicing for Blocks 1, 4 and 5 will outlet to the existing 750 mm diameter sanitary trunk sewer on Airport Road. The sanitary servicing for Blocks 2, 3, 6, 7 and 8 will discharge to the future 600 mm diameter sanitary trunk sewer that is proposed as part of the Block 48-2 (Sandringham East) development.

2. Domestic water and fire flows will be provided for the Site by proposed 300 mm and 400 mm diameter watermains that are proposed in the internal Right-of-Ways. The proposed watermains will be looped through the Site and connect to the existing watermains along Airport Road, Torbram Road and Mayfield Road.

3. External stormwater flows from the adjacent property to the north will continue to be conveyed through the Site under post-development conditions.

4. The Town and TRCA stormwater quantity criteria are satisfied through a combination of measures. Industrial Blocks will be required to control 100-year post development peak flows to the 5-year post development flow on site, prior to discharging to the storm sewer system within Street B. Storage within the Blocks may be in the form of rooftop ponding, surface ponding, and/or underground storage. Stormwater runoff from the controlled Blocks and the Right-of-Ways on Site will be conveyed to the SWM facilities for quantity, quality, and erosion control. The facilities will provide the active storage volume and control required to release the stormwater at the Humber River Watershed unit flow rates. The proposed stormwater management wetlands will discharge towards the NHS/ EPA area on site prior to the existing culvert under Mayfield Road.

5. Erosion control will be provided by the proposed stormwater management facilities by releasing the 25 mm design storm event over a minimum 48-hour period.

6. Stormwater quality control criteria are satisfied by the SWM facilities design. The permanent pool component of the proposed wetlands will provide Level 1 Enhanced Protection for the entire Site.

We recommend approval of the Official Plan Amendment and Draft Plan of Subdivision for the development of the subject lands from the perspective of site servicing and stormwater management requirements. If you have any questions about this report, please call us.

Respectfully submitted,

C.F. CROZIER & ASSOCIATES INC.



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Project Manager

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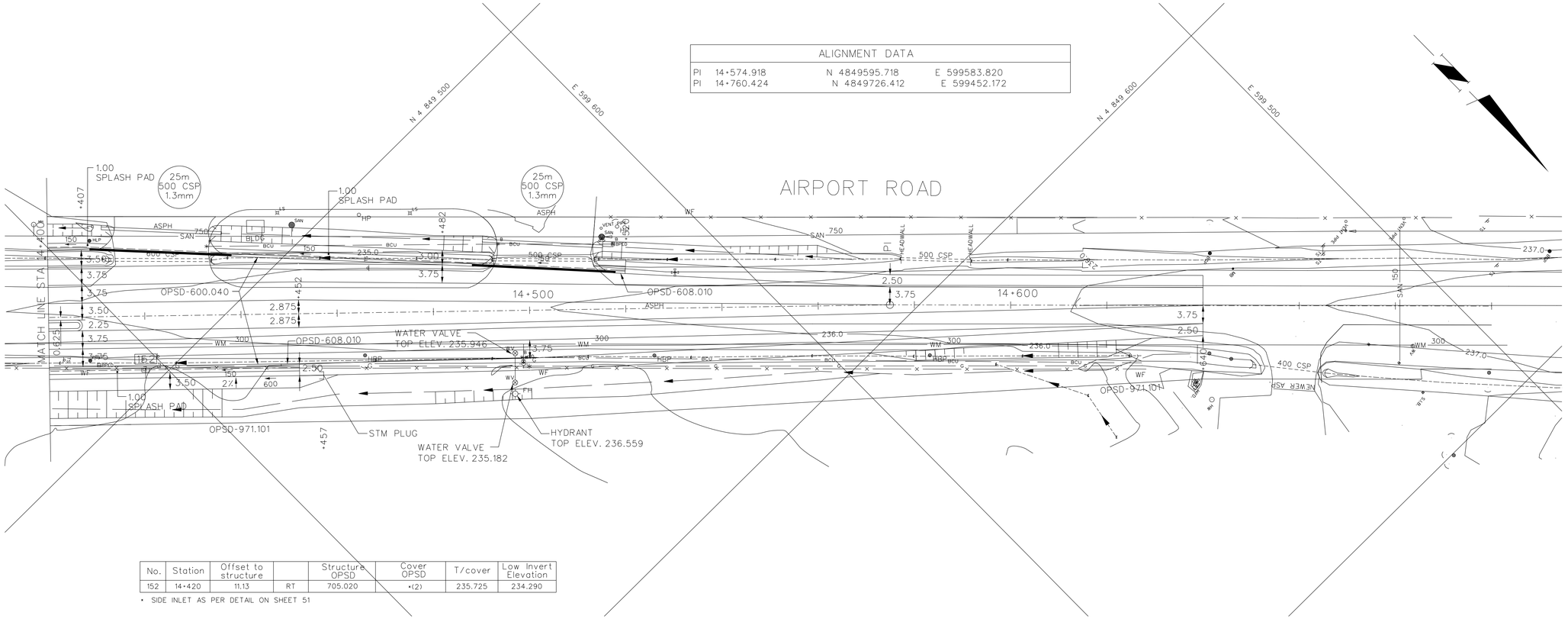
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APPENDIX A

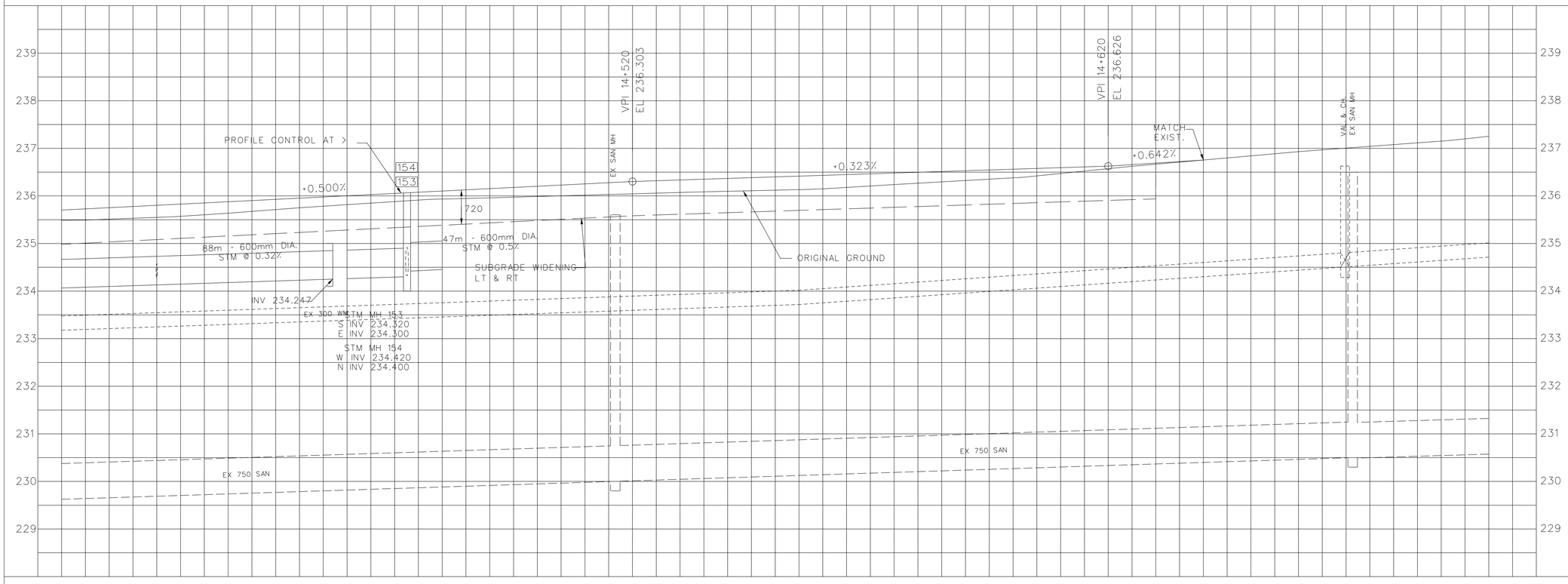
Sanitary

ALIGNMENT DATA			
PI	14+574.918	N 4849595.718	E 599583.820
PI	14+760.424	N 4849726.412	E 599452.172



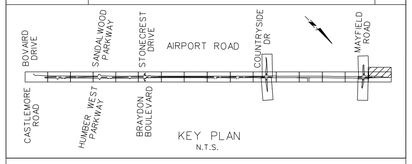
No.	Station	Offset to structure		Structure OPSD	Cover OPSD	T/cover	Low Invert Elevation
152	14+420	11.13	RT	705.020	*(2)	235.725	234.290

* SIDE INLET AS PER DETAIL ON SHEET 51



SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			ONT. HYDRO		
PARKS & REC.			CTV		
ONT. CLEAN WATER					

REVISIONS		
DATE	DETAILS	INIT.
APR 21,2006	REVISION No. 28	J.M.
AUG. 26/09	AS BUILT	J.K.



General Notes

- All Driveways ASPHALT (25mm HL3, 50mm HL8, 150mm GRAN 'A') Unless Otherwise Noted.
- All Service Locations Are Approximate And Must Be Located Accurately In The Field
- Denotes Building - Not Located
- Denotes Building Located
- Type 'B' Bedding Unless Otherwise Noted (SAN)

B.M. No. Elev.

The Contractor Is Responsible For Locating And Protecting All Existing Utilities Prior To And During Construction. Location of shown Existing Utilities Approximate Only, To Be Verified In Field By Contractor.

Giffels Giffels Associates Limited
Consulting Engineers and Architects

REGISTERED PROFESSIONAL ENGINEER
S.S.CHIU
PROVINCE OF ONTARIO

Designed by Chkd.

Designed by

NOTICE TO CONTRACTOR

48 HOURS PRIOR TO COMMMENCING WORK NOTIFY THE FOLLOWING

THE REGIONAL MUNICIPALITY OF PEEL
CITY OF MISSISSAUGA WORKS DEPT.
CITY OF BRAMPTON WORKS DEPT.
TOWN OF CALEDON WORKS DEPT.
BELL TELEPHONE COMPANY
CONSUMERS GAS COMPANY
MINISTRY OF TRANSPORTATION
ONTARIO CLEAN WATER AGENCY
HYDRO ELECTRIC POWER COMM. OF ONTARIO
HYDRO ELECTRIC COMM. CITY OF MISSISSAUGA
HYDRO ELECTRIC COMM. CITY OF BRAMPTON
CABLE TELEVISION

10m 0 10 20 30m HORIZONTAL SCALE

1m 0 1 2 3m VERTICAL SCALE

Region of Peel
Public Works

AIRPORT ROAD

(FROM BOVAIRD DRIVE TO MAYFIELD ROAD)

NEW CONSTRUCTION

Sta. 14+400 To Sta. 14+700

LOTS	AREA	PROJECT NO. 01-4035
CHECKED BY S.B. / E.B.	DRAWN BY R.R. / P.T.	
DATE APR 2005	SHEET 41 OF 156	PLAN NO. 38114-D

$$$$TIME$$$$$$$$$DATE$$$$ $$$$USERNAME$$$$ DGNSPEC*123456789012345678901234567890123456789012

Proposed Sanitary Design Flow - Block 1

Block Area:	36.409	ha
Building GFA:	10.070	ha
Population*	705	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	3.9	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow:

Average Daily Flow =	**2.47**	L/s
Peak Factor =	**3.89**	
Peak Daily Flow =	**9.62**	L/s
Infiltration Flow =	**7.28**	L/s
Total Peak Flow =	**16.90**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 2

Block Area:	11.844	ha
Building GFA:	3.352	ha
Population*	235	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	4.1	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**0.82**	L/s
Peak Factor =	**4.12**	
Peak Daily Flow =	**3.39**	L/s
Infiltration Flow =	**2.37**	L/s
Total Peak Flow =	**5.76**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 3

Block Area:	21.191	ha
Building GFA:	7.542	ha
Population*	528	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	4.0	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow:

Average Daily Flow =	**1.85**	L/s
Peak Factor =	**3.96**	
Peak Daily Flow =	**7.33**	L/s
Infiltration Flow =	**4.24**	L/s
Total Peak Flow =	**11.57**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 4

Block Area:	18.796	ha
Building GFA:	9.376	ha
Population*	656	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	3.9	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**2.30**	L/s
Peak Factor =	**3.91**	
Peak Daily Flow =	**8.99**	L/s
Infiltration Flow =	**3.76**	L/s
Total Peak Flow =	**12.75**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 5

Block Area:	17.455	ha
Building GFA:	6.715	ha
Population*	470	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	4.0	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**1.65**	L/s
Peak Factor =	**3.99**	
Peak Daily Flow =	**6.57**	L/s
Infiltration Flow =	**3.49**	L/s
Total Peak Flow =	**10.06**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 6

Block Area:	3.907	ha
Building GFA:	1.418	ha
Population*	99	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	4.2	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**0.35**	L/s
Peak Factor =	**4.24**	
Peak Daily Flow =	**1.48**	L/s
Infiltration Flow =	**0.78**	L/s
Total Peak Flow =	**2.26**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 7

Block Area:	18.162	ha
Building GFA:	9.437	ha
Population*	661	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	3.9	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**2.32**	L/s
Peak Factor =	**3.91**	
Peak Daily Flow =	**9.05**	L/s
Infiltration Flow =	**3.63**	L/s
Total Peak Flow =	**12.68**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

Proposed Sanitary Design Flow - Block 8

Block Area:	17.232	ha
Building GFA:	7.409	ha
Population*	519	

Design Criteria

Total Peak Flow = Average Daily Flow + Infiltration Allowance

Peak Factor =	4.0	Harmon Peaking Factor
Average Industrial Flow =	302.8	L/cap/d
Infiltration =	0.20	L/s/ha

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Sanitary Sewer Design Criteria (March 2017)

Sanitary Design Flow - Unit Sewage Flow Rate:

Average Daily Flow =	**1.82**	L/s
Peak Factor =	**3.97**	
Peak Daily Flow =	**7.21**	L/s
Infiltration Flow =	**3.45**	L/s
Total Peak Flow =	**10.66**	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Weston Consulting

CROZIER CONSULTING ENGINEERS

2022-5842 Tullamore Lands
Sanitary Demand Flows - Summary

Date: 2021.11.24
Designed By: L.E
Checked By: JMS
Updated: 2023.04.06

Block	Block Area	Building GFA	Equivalent Population	Peak Flow	Infiltration Flow	Total Flow	Outlet
	ha	ha		(L/s)	(L/s)	(L/s)	
1	36.41	10.07	705	9.62	7.28	16.90	Airport Rd
2	11.84	3.35	235	3.39	2.37	5.76	Mayfield Rd
3	21.19	7.54	528	7.33	4.24	11.57	Mayfield Rd
4	18.80	9.38	656	8.99	3.76	12.75	Airport Rd
5	17.46	6.72	470	6.57	3.49	10.06	Airport Rd
6	3.91	1.42	99	1.48	0.78	2.26	Mayfield Rd
7	18.16	9.44	661	9.05	3.63	12.68	Mayfield Rd
8	17.23	7.41	519	7.21	3.45	10.66	Mayfield Rd
Total	**145.00**	**55.32**	**3872**	**53.64**	**29.00**	**82.64**	

Note: Block Areas are based on Weston Consulting Draft Plan
Note: Population estimates are based on building GFAs provided by Turner Fleischer Site Plan

SANITARY SEWER DESIGN SHEET

Tullamore, Region of Peel, Town of Caledon

CROZIER CONSULTING ENGINEERS

Project #: 2022-5842
Updated Date: 2023.04.06
Designed: L.E.
Checked: J.S.

Min Diameter = 250 mm
Mannings 'n'= 0.013
Min. Velocity = 0.75 m/s
Max. Velocity = 3.50 m/s

Avg. Domestic Flow = 302.8 l/c/d
Infiltration = 0.200 l/s/ha
Max. Peaking Factor = 4.00
Min. Peaking Factor= 1.50

Factor of Safety = 20 %

NOMINAL PIPE SIZE USED

DESCRIPTION	FROM MH	TO MH	EXTERNAL							COMMERCIAL/INDUSTRIAL/INSTITUTIONAL						FLOW CALCULATIONS					PIPE DATA						NOTES
			AREA (ha)	ACC. AREA (ha)	UNITS (#)	DENISTY (P/ha)	DENSITY (P/unit)	EXT POP	ACCUM. EXT POP.	AREA (ha)	ACC. AREA (ha)	EQUIV. POP. (p/ha)	FLOW RATE (l/s/ha)	EQUIV. POP.	ACCUM. EQUIV. POP.	INFILTRATION (l/s)	TOTAL ACCUM. POP.	PEAKING FACTOR	POP. FLOW (l/s)	TOTAL FLOW (l/s)	SLOPE (%)	PIPE DIAMETER (mm)	FULL FLOW CAPACITY (l/s)	FULL FLOW VELOCITY (m/s)	ACTUAL VELOCITY (m/s)	PERCENT FULL (%)	
STREET C																											
100	MH1A	MH2A						5250	5250	0.40	0.40					0.08	5250	3.23	59.34	59.42	0.35	600	363.25	1.28	0.95	16.4%	Approx allowable pop, = 5,250 for future connections
101	MH2A	MH3A							5250	0.20	0.60					0.12	5250	3.23	59.34	59.46	0.35	600	363.25	1.28	0.95	16.4%	
102	MH3A	MH4A							5250	0.30	0.90					0.18	5250	3.23	59.34	59.52	0.35	600	363.25	1.28	0.95	16.4%	
103	MH4A	MH5A							5250	0.30	1.20					0.24	5250	3.23	59.34	59.58	0.35	600	363.25	1.28	0.95	16.4%	
104	MH5A	MH6A							5250	0.30	1.50					0.30	5250	3.23	59.34	59.64	0.35	600	363.25	1.28	0.95	16.4%	
Block 7	MH100A	MH6A	8.7255	8.73						9.4365	9.44	70		661	661	3.63	661	3.91	9.05	12.69	2.00	250	84.10	1.71	1.23	15.1%	Ext. area = block area excl. GFA. /Internal area = GFA
105	MH6A	MH7A		8.73					5250	0.20	11.14				661	3.97	5911	3.18	65.81	69.78	0.35	600	363.25	1.28	0.99	19.2%	
STREET B																											
106	MH8A	MH10A								0.40	0.40					0.08				0.08	0.35	600	363.25	1.28	0.12	0.0%	Connection provided for potential fut. Connection
107	MH10A	MH11A								0.30	0.70					0.14				0.14	0.35	600	363.25	1.28	0.14	0.0%	
108	MH11A	MH7A								0.20	0.90					0.18				0.18	0.35	600	363.25	1.28	0.16	0.0%	
110	MH7A	MH12A		8.73					5250	0.30	12.34				661	4.21	5911	3.18	65.81	70.02	0.35	600	363.25	1.28	0.99	19.3%	
111	MH12A	MH13A		8.73					5250	0.30	12.64				661	4.27	5911	3.18	65.81	70.08	0.35	600	363.25	1.28	0.99	19.3%	
Block 8	MH101A	MH13A	9.8230	9.82						7.4090	7.41	70		519	519	3.45	519	3.97	7.21	10.66	2.00	250	84.10	1.71	1.17	12.7%	Ext. area = block area excl. GFA. /Internal area = GFA
Block 3	MH102A	MH13A	13.6487	13.65						7.5423	7.54	70		528	528	4.24	528	3.96	7.33	11.57	2.00	250	84.10	1.71	1.20	13.8%	Ext. area = block area excl. GFA. /Internal area = GFA
112	MH13A	MH14A		32.20					5250	0.30	27.89				1708	12.02	6958	3.11	75.82	87.83	0.35	600	363.25	1.28	1.06	24.2%	
113	MH14A	MH15A		32.20					5250	0.30	28.19				1708	12.08	6958	3.11	75.82	87.89	0.35	600	363.25	1.28	1.06	24.2%	
114	MH15A	MH16A		32.20					5250	0.30	28.49				1708	12.14	6958	3.11	75.82	87.95	0.35	600	363.25	1.28	1.06	24.2%	
115	MH16A	MH18A		32.20					5250	0.30	28.79				1708	12.20	6958	3.11	75.82	88.01	0.35	600	363.25	1.28	1.06	24.2%	
116	MH18A	MH19A		32.20					5250	0.20	28.99				1708	12.24	6958	3.11	75.82	88.05	0.35	600	363.25	1.28	1.06	24.2%	
117	MH19A	MH20A		32.20					5250	0.20	29.19				1708	12.28	6958	3.11	75.82	88.09	0.35	600	363.25	1.28	1.06	24.3%	
118	MH20A	MH21A		32.20					5250	0.20	29.39				1708	12.32	6958	3.11	75.82	88.13	0.35	600	363.25	1.28	1.06	24.3%	
119	MH21A	MH22A		32.20					5250	0.30	29.69				1708	12.38	6958	3.11	75.82	88.19	0.35	600	363.25	1.28	1.06	24.3%	
120	MH22A	MH23A		32.20					5250	0.30	29.99				1708	12.44	6958	3.11	75.82	88.25	0.35	600	363.25	1.28	1.06	24.3%	
121	MH23A	MH24A		32.20					5250	0.30	30.29				1708	12.50	6958	3.11	75.82	88.31	0.35	600	363.25	1.28	1.06	24.3%	
Block 2	MH106A	MH24A	8.4924	8.49						3.3516	3.35	70		235	235	2.37	235	4.00	3.29	5.66	2.00	250	84.10	1.71		6.7%	
Block 6	MH107A	MH24A	2.4260	2.43						1.4810	1.48	70		104	104	0.78	104	4.00	1.46	2.24	2.00	250	84.10	1.71	0.74	2.7%	Ext. area = block area excl. GFA. /Internal area = GFA
122	MH24A	MH25A		43.12					5250	0.20	35.32				2047	15.69	7297	3.09	79.00	94.69	0.35	600	363.25	1.28	1.08	26.1%	Ext. area = block area excl. GFA. /Internal area = GFA
123	MH25A	MH26A		43.12					5250	0.30	35.62				2047	15.75	7297	3.09	79.00	94.75	0.35	600	363.25	1.28	1.08	26.1%	
124	MH26A	MH27A		43.12					5250	0.30	35.92				2047	15.81	7297	3.09	79.00	94.81	0.35	600	363.25	1.28	1.08	26.1%	
125	MH27A	MH28A		43.12					5250	0.10	36.02				2047	15.83	7297	3.09	79.00	94.83	0.35	600	363.25	1.28	1.08	26.1%	
126	MH28A	MH29A		43.12					5250	0.10	36.12				2047	15.85	7297	3.09	79.00	94.85	0.35	600	363.25	1.28	1.08	26.1%	
127	MH29A	MH30A		43.12					5250	0.10	36.22				2047	15.87	7297	3.09	79.00	94.87	0.35	600	363.25	1.28	1.08	26.1%	
	MH30A	FUT. 600 dia San South of Mayfield		43.12					5250		36.22				2047	15.87	7297	3.09	79.00	94.87	0.35	600	363.25	1.28	1.08	26.1%	

SANITARY SEWER DESIGN SHEET

Tullamore, Region of Peel, Town of Caledon

CROZIER CONSULTING ENGINEERS

Project #: 2022-5842
Updated Date: 2023.04.06
Designed: L.E.
Checked: J.S.

Min Diameter = 250 mm
Mannings 'n'= 0.013
Min. Velocity = 0.75 m/s
Max. Velocity = 3.50 m/s

Avg. Domestic Flow = 302.8 l/c/d
Infiltration = 0.200 l/s/ha
Max. Peaking Factor = 4.00
Min. Peaking Factor= 1.50

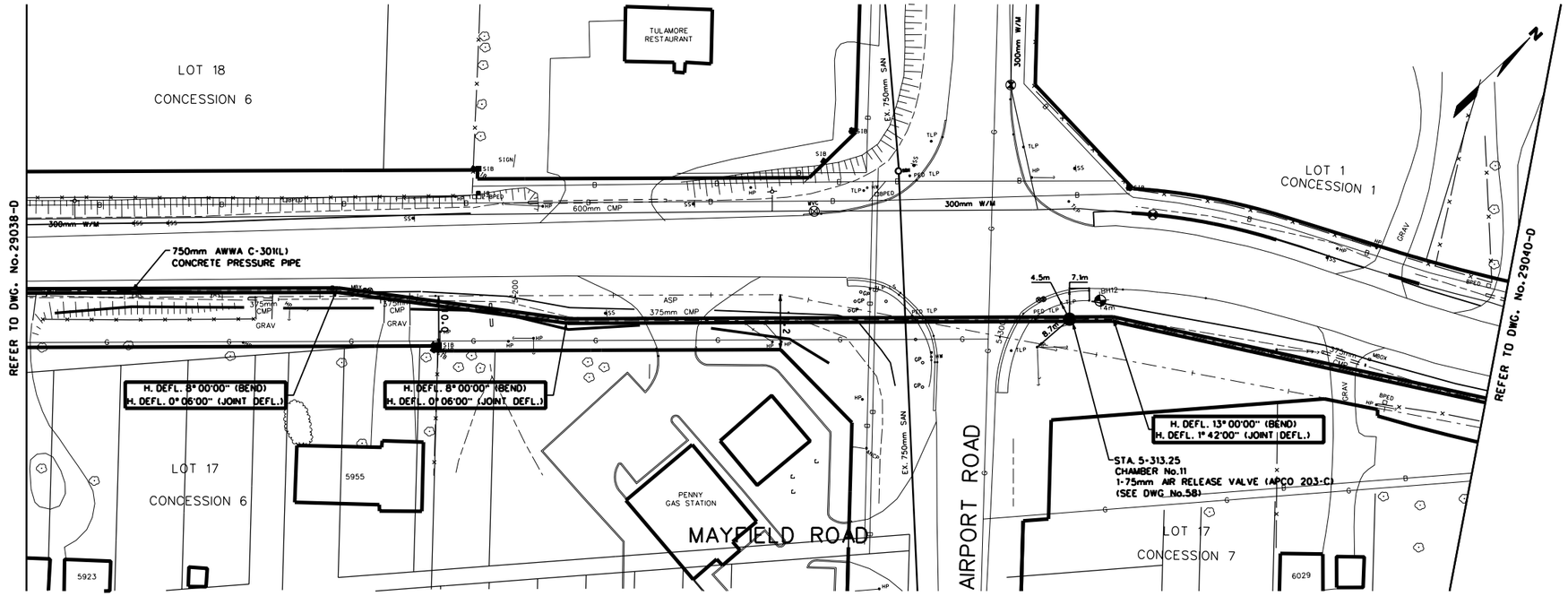
Factor of Safety = 20 %

NOMINAL PIPE SIZE USED

DESCRIPTION	FROM MH	TO MH	EXTERNAL							COMMERCIAL/INDUSTRIAL/INSTITUTIONAL						FLOW CALCULATIONS					PIPE DATA						NOTES
			AREA (ha)	ACC. AREA (ha)	UNITS (#)	DENISTY (P/ha)	DENSITY (P/unit)	EXT POP	ACCUM. EXT POP.	AREA (ha)	ACC. AREA (ha)	EQUIV. POP. (p/ha)	FLOW RATE (l/s/ha)	EQUIV. POP.	ACCUM. EQUIV. POP.	INFILTRATION (l/s)	TOTAL ACCUM. POP.	PEAKING FACTOR	POP. FLOW (l/s)	TOTAL FLOW (l/s)	SLOPE (%)	PIPE DIAMETER (mm)	FULL FLOW CAPACITY (l/s)	FULL FLOW VELOCITY (m/s)	ACTUAL VELOCITY (m/s)	PERCENT FULL (%)	
STREET A																											
Block 1	MH103A	MH50A	26.3388	26.34						10.0702	10.07	70		705	705	7.28	705	3.89	9.62	16.90	2.00	300	136.76	1.93	1.32	12.4%	Ext. area = block area excl. GFA. /Internal area = GFA
	MH50A	MH51A		26.34						0.30	10.37				705	7.34	705	3.89	9.62	16.96	0.50	300	68.38	0.97	0.80	24.8%	
	MH51A	MH52A		26.34						0.30	10.67				705	7.40	705	3.89	9.62	17.02	0.50	300	68.38	0.97	0.80	24.9%	
	MH52A	MH53A		26.34						0.30	10.97				705	7.46	705	3.89	9.62	17.08	0.50	300	68.38	0.97	0.80	25.0%	
Block 4	MH104A	MH53A	9.4201	9.42						9.3759	9.38	70		656	656.313	3.76	656.313	3.91	8.99	12.75	2.00	250	84.10	1.71	1.24	15.2%	Ext. area = block area excl. GFA. /Internal area = GFA
Block 5	MH105A	MH53A	10.7403	10.74						6.7147	6.71	70		470	470.029	3.49	470.029	3.99	6.57	10.06	2.00	250	84.10	1.71	1.15	12.0%	Ext. area = block area excl. GFA. /Internal area = GFA
128	MH53A	MH54A		46.50						0.30	27.36				1831.342	14.77	1831.342	3.62	23.20	37.98	0.50	300	68.38	0.97	0.99	55.5%	
129	MH54A	MH55A		46.50						0.30	27.66				1831.342	14.83	1831.342	3.62	23.20	38.04	0.50	300	68.38	0.97	0.99	55.6%	
130	MH55A	MH56A		46.50						0.20	27.86				1831.342	14.87	1831.342	3.62	23.20	38.08	0.50	300	68.38	0.97	0.99	55.7%	
	MH56A	MH57A		46.50							27.86				1831.342	14.87	1831.342	3.62	23.20	38.08	0.50	300	68.38	0.97	0.99	55.7%	
	MH57A	EX. 750dia on Airport		46.50							27.86				1831.342	14.87	1831.342	3.62	23.20	38.08		300					

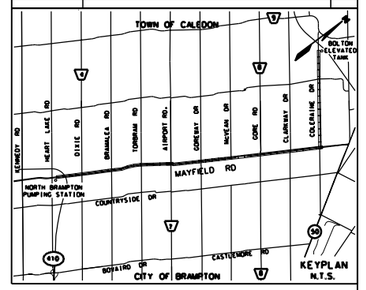
APPENDIX B

Watermain



SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN. SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			ONT. HYDRO		
PARKS & REC.			CTV		
ONT. CLEAN WATER					

REVISIONS		
DATE	DETAILS	INIT.
MARCH 2002	CONSTRUCTION RECORD	T.M.

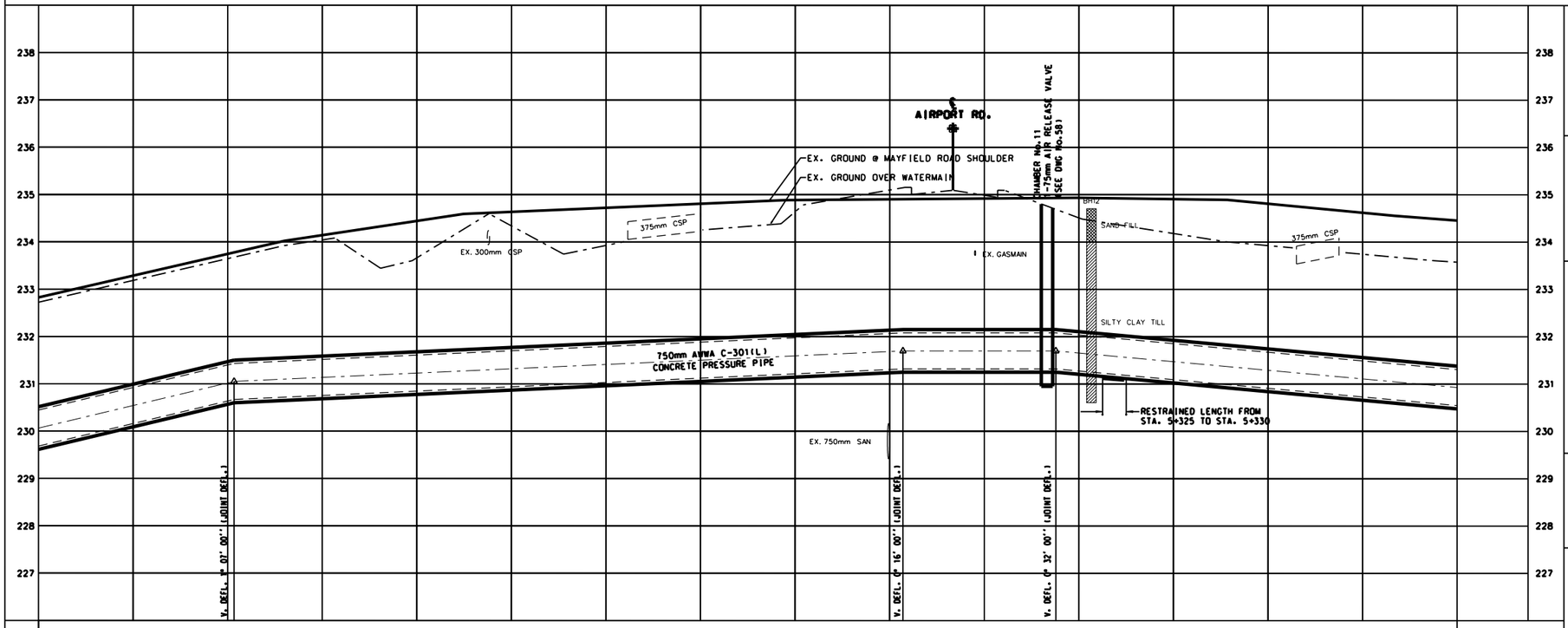


NOTE:
CHAMBER SWING TIES ARE TO ACCESS COVER

CONSTRUCTION RECORD

CONSTRUCTION PERIOD JAN. 2001 TO AUG. 2001

FOR GENERAL NOTES SEE PLAN 1



General Notes

- All Driveways ASPHALT Unless Otherwise Noted.
- All Service Locations Are Approximate And Must Be Located Accurately In The Field
- Denotes Building - Not Located
- Denotes Building Located
- Type 'B' Bedding Unless Otherwise Noted (SAN)

B.M. No. Elev.

The Contractor Is Responsible For Locating And Protecting All Existing Utilities Prior To And During Construction Location of Existing Utilities Approximate Only, To Be Verified In Field By Contractor.

KMK Consultants Limited
Consulting Engineers, Project Managers, Ecological Planners, Landscape Architects
DESIGNED BY _____ CHKD. _____

REGISTERED PROFESSIONAL ENGINEER
R. A. VARIAE
PROVINCE OF ONTARIO
Approved by _____

NOTICE TO CONTRACTOR

48 HOURS PRIOR TO COMMENCING WORK NOTIFY THE FOLLOWING

THE REGIONAL MUNICIPALITY OF PEEL
CITY OF BRAMPTON WORKS DEPT.
TOWN OF CALEDON WORKS DEPT.
BELL TELEPHONE COMPANY
CONSUMERS GAS COMPANY
MINISTRY OF TRANSPORTATION
HYDRO ELECTRIC POWER COMM. OF ONTARIO
HYDRO ELECTRIC COMM. TOWN OF CALEDON
HYDRO ELECTRIC COMM. CITY OF BRAMPTON
CABLE TELEVISION

10m 0 10 20 30m HORIZONTAL SCALE
1m 0 1 2 3m VERTICAL SCALE

Region of Peel
Public Works

MAYFIELD ROAD

PROPOSED 750mm BOLTON FEEDERMAIN

Sta. 5+100 To Sta. 5+400

Lots	Ref No. 2199-A-35	Project No.	99-1930
Checked by R.V.	Drawn by G.D.	Plan No.	29039-D
Date SEPT 00	Sheet 18 of x		

CROZIER CONSULTING ENGINEERS

Project: Tullamore Lands | **Design:** LE | **Date:** 2021-11-15
Project No.: 2022-5842 | **Check:** JMS | **Updated:** 2023.04.06

Water Demand - Block 1

Block Area	36.409	ha
Building Area	10.070	ha
Population	705	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	211470	L/day
	2.45	L/s
Maximum Daily Demand:	296058	L/day
	3.43	L/s
Peak Hourly Demand:	634410	L/day
	7.34	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 2

Block Area	11.844	ha
Building Area	3.352	ha
Population	235	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	70392	L/day
	0.81	L/s
Maximum Daily Demand:	98549	L/day
	1.14	L/s
Peak Hourly Demand:	211176	L/day
	2.44	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 3

Block Area	21.432	ha
Building Area	7.542	ha
Population	528	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	158382	L/day
	1.83	L/s
Maximum Daily Demand:	221735	L/day
	2.57	L/s
Peak Hourly Demand:	475146	L/day
	5.50	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 4

Block Area	18.796	ha
Building Area	9.376	ha
Population	656	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	196896	L/day
	2.28	L/s
Maximum Daily Demand:	275654	L/day
	3.19	L/s
Peak Hourly Demand:	590688	L/day
	6.84	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 5

Block Area	17.450	ha
Building Area	6.715	ha
Population	470	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	141015	L/day
	1.63	L/s
Maximum Daily Demand:	197421	L/day
	2.28	L/s
Peak Hourly Demand:	423045	L/day
	4.90	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 6

Block Area	3.907	ha
Building Area	1.418	ha
Population	99	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	29778	L/day
	0.34	L/s
Maximum Daily Demand:	41689	L/day
	0.48	L/s
Peak Hourly Demand:	89334	L/day
	1.03	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 7

Block Area	18.162	ha
Building Area	9.437	ha
Population	661	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	198177	L/day
	2.29	L/s
Maximum Daily Demand:	277448	L/day
	3.21	L/s
Peak Hourly Demand:	594531	L/day
	6.88	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

Water Demand - Block 8

Block Area	17.232	ha
Building Area	7.409	ha
Population	519	persons

Design Criteria:

Average Daily Demand:	300	L/employee.day
Maximum Daily Demand Peaking Factor:	1.40	-
Peak Hourly Demand Peaking Factor:	3.00	-

Region of Peel - Public Works Design, Specifications & Procedures Manual - Linear Infrastructure - Watermain Design Criteria (June 2010)

Domestic Water Demand:

Average Daily Demand:	155589	L/day
	1.80	L/s
Maximum Daily Demand:	217825	L/day
	2.52	L/s
Peak Hourly Demand:	466767	L/day
	5.40	L/s

*Population calculation is based on the total Gross Floor Area (GFA) of all the proposed buildings shown on the Site Plan prepared by Turner Fleischer.

CROZIER CONSULTING ENGINEERS

Project: Tullamore Lands
Project No.: 2022-5842

Design: LE
Check: JMS

Date: 2021-11-15
Updated: 2023.01.19

Block	Equivalent Population	Average Day Demand (L/s)	Maximum Day Demand (L/s)	Peak Hour Demand (L/s)
1	705	2.45	3.43	7.34
2	235	0.81	1.14	2.44
3	528	1.83	2.57	5.50
4	656	2.28	3.19	6.84
5	470	1.63	2.28	4.90
6	99	0.34	0.48	1.03
7	661	2.29	3.21	6.88
8	519	1.80	2.52	5.40
Total	3872	13.45	18.82	40.34

CROZIER
CONSULTING ENGINEERS

Project.: Tullamore Lands
Project No.: 2022-5842
Date.: 2023-01-18
Design: AM
Checked by: JS

Fire Protection Flow Calculation Summary
Tullamore Lands

WATER SUPPLY FOR PUBLIC FIRE PROTECTION (2020)
FIRE UNDERWRITER'S SURVEY

Block	Building	Total Floor Area (m²)	Flow (L/min)	Reduction (L/min)	Sprinkler Reduction (L/min)	Exposure Surcharge (L/min)	Required Flow (L/min)	Required Flow (L/s)
Block 1	**Building A**	100,702	41,889	-6,283	17,803	0	18,000	300.0
Block 3	**Building C**	75,423	36,252	-5,438	15,408	0	15,000	250.0
Block 4	**Building D**	93,759	40,419	-6,063	17,179	0	17,000	283.3
Block 7	**Building E**	94,365	40,549	-6,082	17,234	0	17,000	283.3
Block 8	**Building F**	74,090	35,930	-5,390	15,271	0	15,000	250.0
Block 5	**Building H**	67,147	34,205	-5,131	14,538	0	15,000	250.0
Block 2	**Building I**	33,516	24,166	-3,625	10,271	0	10,000	166.7
Block 6	**Building K**	19,535	18,450	-2,768	7,842	0	8,000	133.3

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 1
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 100,702.0 sq.m

Area = 100,702 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 41,889 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-6,283 L/min reduction
35,606 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

17,803 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	268.0	0%	-
W	225.0	0%	-
N	104.0	0%	-
S	97.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	41,889	
No. 2	-6,283	reduction
No. 3	-17,803	reduction
No. 4	0	surcharge
Required Flow:	**17,803 L/min**	
Rounded to nearest 1000 L/min:	**18,000 L/min**	or **300.0 L/s** 4,755 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 2
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 33,516.0 sq.m

Area = 33,516 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 24,166 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-3,625 L/min reduction
20,542 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

10,271 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	642.0	0%	-
W	167.0	0%	-
N	97.0	0%	-
S	64.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	24,166	
No. 2	-3,625	reduction
No. 3	-10,271	reduction
No. 4	0	surcharge
Required Flow:	**10,271 L/min**	
Rounded to nearest 1000 L/min:	**10,000 L/min**	or **166.7 L/s** 2,642 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 3
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 75,423.0 sq.m

Area = 75,423 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 36,252 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-5,438 L/min reduction
30,815 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

15,408 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	329.0	0%	-
W	112.0	0%	-
N	N/A	0%	-
S	136.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	36,252	
No. 2	-5,438	reduction
No. 3	-15,408	reduction
No. 4	0	surcharge
Required Flow:	**15,407 L/min**	
Rounded to nearest 1000 L/min:	**15,000 L/min**	or **250.0 L/s** 3,963 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 4
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 93,759.0 sq.m

Area = 93,759 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 40,419 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-6,063 L/min reduction
34,357 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

17,179 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	184.0	0%	-
W	268.0	0%	-
N	137.0	0%	-
S	160.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	40,419	
No. 2	-6,063	reduction
No. 3	-17,179	reduction
No. 4	0	surcharge
Required Flow:	**17,178 L/min**	
Rounded to nearest 1000 L/min:	**17,000 L/min**	or **283.3 L/s**
		4,491 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 5
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 67,147.0 sq.m

Area = 67,147 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 34,205 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-5,131 L/min reduction
29,075 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

14,538 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	151.5	0%	-
W	270.0	0%	-
N	160.0	0%	-
S	90.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	34,205	
No. 2	-5,131	reduction
No. 3	-14,538	reduction
No. 4	0	surcharge
Required Flow:	**14,537 L/min**	
Rounded to nearest 1000 L/min:	**15,000 L/min**	or **250.0 L/s** (3,963 USGPM)

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 6
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM/LE
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 19,535.0 sq.m

Area = 19,535 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 18,450 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-2,768 L/min reduction
15,683 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

7,842 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	N/A	0%	-
W	85.0	0%	-
N	150.0	0%	-
S	N/A	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	18,450	
No. 2	-2,768	reduction
No. 3	-7,842	reduction
No. 4	0	surcharge
Required Flow:	**7,841 L/min**	
Rounded to nearest 1000 L/min:	**8,000 L/min**	or **133.3 L/s**
		2,113 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 7
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 94,365.0 sq.m

Area = 94,365 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 40,549 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-6,082 L/min reduction
34,467 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

17,234 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	107.5	0%	-
W	65.5	0%	-
N	78.0	0%	-
S	127.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	40,549	
No. 2	-6,082	reduction
No. 3	-17,234	reduction
No. 4	0	surcharge
Required Flow:	**17,234 L/min**	
Rounded to nearest 1000 L/min:	**17,000 L/min**	or **283.3 L/s**
		4,491 USGPM

CROZIER CONSULTING ENGINEERS

Tullamore Lands - BLOCK 8
Fire Protection Volume Calculation
CFCA File: 2022-5842

Date: 2023-01-18
Design: AM
Check: JS

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

1. An estimate of fire flow required for a given area may be determined by the formula:

RFF = 220 * C * sqrt A

where

RFF = the required fire flow in litres per minute

C = coefficient related to the type of construction:

=	1.5	for Type V Wood Frame Construction (structure essentially all combustible)
=	0.8	for Type IV-A Mass Timber Construction (encapsulated mass timber)
=	0.9	for Type IV-B Mass Timber Construction (rated mass timber)
=	1.0	for Type IV-C Mass Timber Construction (ordinary mass timber)
=	1.5	for Type IV-D Mass Timber Construction (un-rated mass timber)
=	1.0	for Type III Ordinary Construction (brick or other masonry walls, combustible floor and interior)
=	0.8	for Type II Non-combustible Construction (unprotected metal structural components)
=	0.6	for Type I Fire-resistive Construction (fully protected frame, floors, roof)

Proposed Buildings

Floor Area 74,090.0 sq.m

Area = 74,090 sq.m

C = 0.6 Assumes Type I Fire-resistive Construction (fully protected frame, floors, roof)

Therefore RFF = 35,930 L/min

2. Values obtained in No. 1 may be reduced by as much as 25% for occupancies having low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard.

Non-Combustible	-25%	Free Burning	15%
Limited Combustible	-15%	Rapid Burning	25%
Combustible	0% (No Change)		

Limited Combustible	-15% reduction

-5,390 L/min reduction
30,541 L/min

Note: Flow determined shall not be less than 2,000 L/min

3. Sprinklers - The value obtained in No. 2 above maybe reduced by up to 50% for complete automatic sprinkler protection. The initial credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards.

As part of this analysis, the building will have sprinkler protection: 50%

15,271 L/min reduction

Water Supply for Public Fire Protection - 2020
Fire Underwriters Survey

Part II - Guide for Determination of Required Fire Flow

4. Exposure - To the value obtained in No. 2, a percentage should be added for structures exposed within 45 metres by the fire area under consideration. The percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s) and the effect of hillside locations on the possible spread of fire.

Separation	Charge	Separation	Charge
0 to 3 m	25%	20.1 to 30 m	10%
3.1 to 10 m	20%	> 30 m	0%
10.1 to 20 m	15%		

Exposed buildings

Name	Distance (m)	Charge (%)	Surcharge (L/min)
E	113.0	0%	-
W	85.0	0%	-
N	127.0	0%	-
S	104.0	0%	-

0 L/min Surcharge

Determine Required Fire Flow

No.1	35,930	
No. 2	-5,390	reduction
No. 3	-15,271	reduction
No. 4	0	surcharge
Required Flow:	**15,270 L/min**	
Rounded to nearest 1000 L/min:	**15,000 L/min**	or **250.0 L/s**
		3,963 USGPM

Hydrant Flow Test Report

Residual Hydrant Number _____

Operator: LEE STANSFIELD

Date: 21-Jun-29 Time: 1:45 PM

Witness: REGION OF PEEL

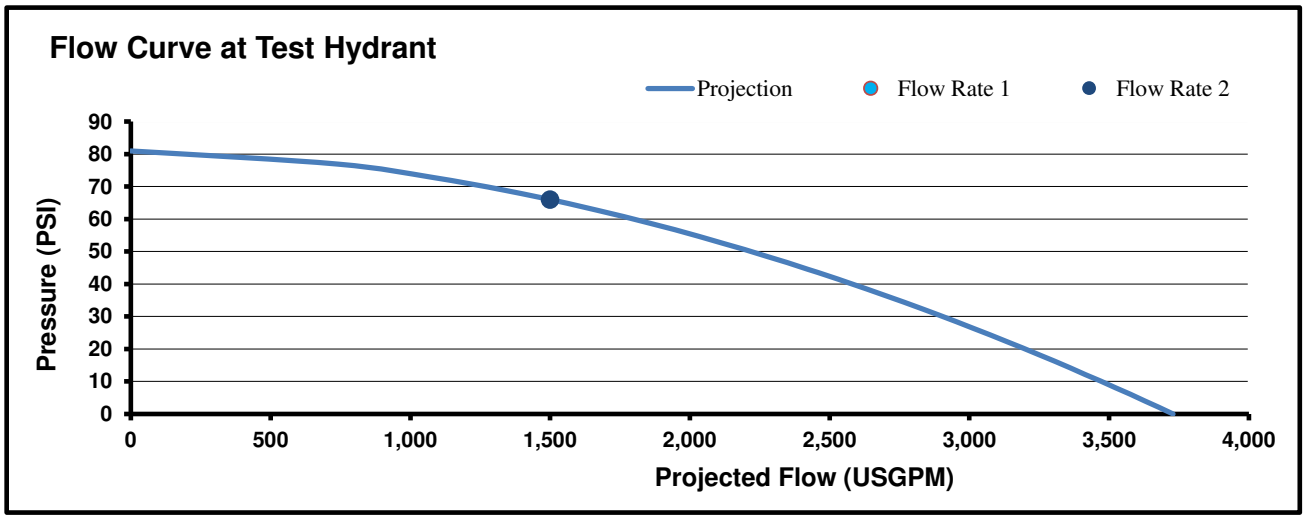
Residual Test Hydrant:	1ST HYDR N OF DAVIS ON AIRPORT, CALEDON		
Hydrant Number:		NFPA Colour Code:	**CLASS AA - BLUE**
Owner:	REGION OF PEEL		

STATIC PRESSURE:	81 psi	558 kPa	Pressure Drop
RESIDUAL PRESSURE 1:	psi	kPa	
RESIDUAL PRESSURE 2:	66 psi	455 kPa	22.7%

			Hydrant Number
Flow Hydrants:	A	12203 AIRPORT RD	
	B		
	C		

Hydrant No.	Flow Device	Outlet Dia. (in.)	Flow Rate 1 Reading (psi)	Flow Rate 1 (USGPM)	Flow Rate 2 Reading (psi)	Flow Rate 2 (USGPM)
A	Pitot	2.5		0		0
A	Pitot	2.5		0		0
A	HoseMonster	4"				1500
Total Flow (USGPM)				0		1500
Total Flow (L/second)				0		95
Available Flow At Test Hydrant at 20 psi			0	USGPM	3,199	USGPM
			0	L/second	202	L/second

Average Projection at 20 PSI	3,199	USGPM



Comments/Discrepencies/Diagram:

Watermark Solutions Limited
(705) 250-0368 www.watermark.ca

Hydrant Flow Test Report

Residual Hydrant Number _____

Operator: LEE STANSFIELD

Date: 21-Jun-29 Time: 2:45 PM

Witness: REGION OF PEEL

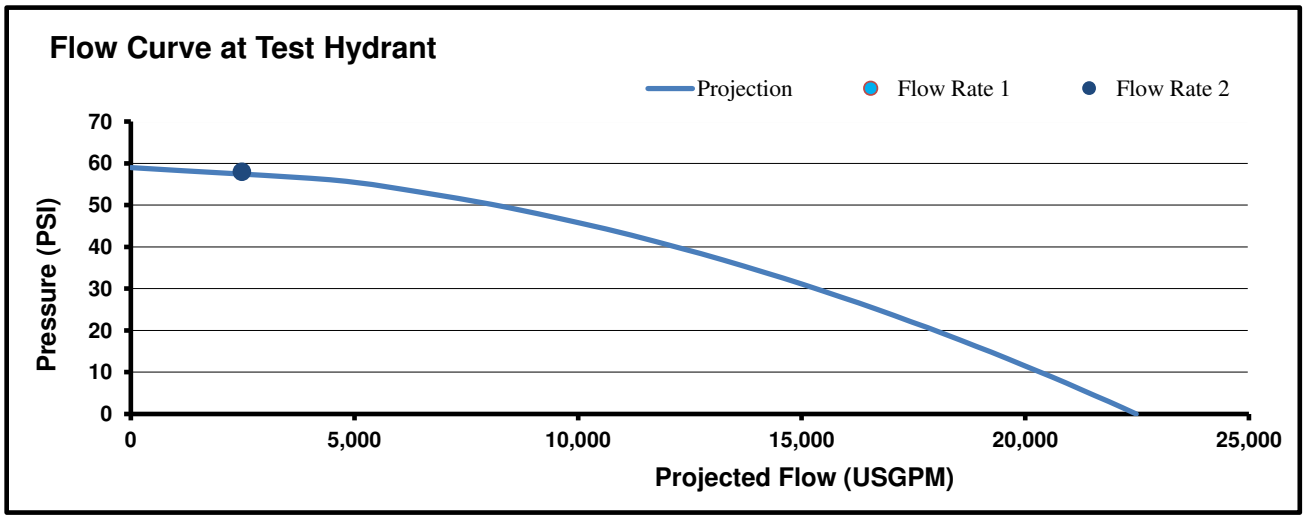
Residual Test Hydrant:	5762 MAYFIELD, CALEDON		
Hydrant Number:		NFPA Colour Code:	**CLASS AA - BLUE**
Owner:	REGION OF PEEL		

STATIC PRESSURE:	59 psi	407 kPa	Pressure Drop
RESIDUAL PRESSURE 1:	psi	kPa	
RESIDUAL PRESSURE 2:	58 psi	400 kPa	1.7%

			Hydrant Number
Flow Hydrants:	A	OPP 5847 MAYFIELD	
	B		
	C		

Hydrant No.	Flow Device	Outlet Dia. (in.)	Flow Rate 1 Reading (psi)	Flow Rate 1 (USGPM)	Flow Rate 2 Reading (psi)	Flow Rate 2 (USGPM)
A	Pitot	2.5		0	10	493
A	Pitot	2.5		0	10	493
A	HoseMonster	4"		0		1500
Total Flow (USGPM)				0		2487
Total Flow (L/second)				0		157
Available Flow At Test Hydrant at 20 psi			0	USGPM	17,980	USGPM
			0	L/second	1,134	L/second

Average Projection at 20 PSI	17,980	USGPM



Comments/Discrepencies/Diagram:

Watermark Solutions Limited
(705) 250-0368 www.watermark.ca

Hydrant Flow Test Report

Residual Hydrant Number _____

Operator: LEE STANSFIELD

Date: 21-Jun-29 Time: 1:25 PM

Witness: REGION OF PEEL

Residual Test Hydrant:	1ST HYDR S OF 12245 TORBRAM, CALEDON
Hydrant Number:	
Owner:	REGION OF PEEL

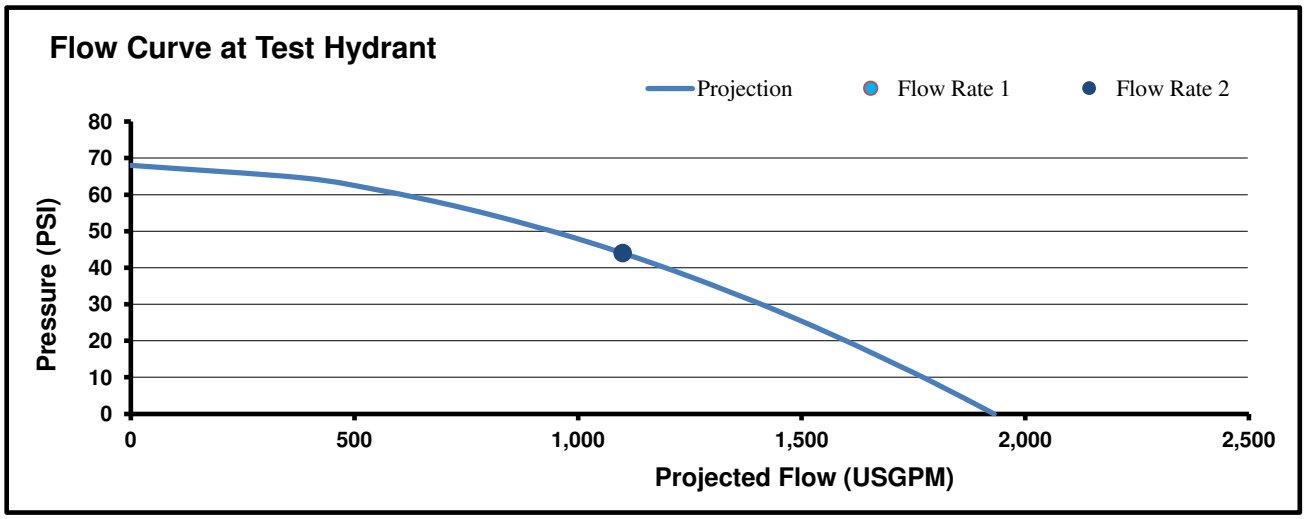
NFPA Colour Code: **CLASS AA - BLUE**

STATIC PRESSURE:	68 psi	469 kPa	Pressure Drop
RESIDUAL PRESSURE 1:	psi	kPa	
RESIDUAL PRESSURE 2:	44 psi	303 kPa	54.5%

			Hydrant Number
Flow Hydrants:	A	1ST HYDR N 12245 TORBRAM	
	B		
	C		

Hydrant No.	Flow Device	Outlet Dia. (in.)	Flow Rate 1 Reading (psi)	Flow Rate 1 (USGPM)	Flow Rate 2 Reading (psi)	Flow Rate 2 (USGPM)
A	Pitot	2.5		0		0
A	Pitot	2.5		0		0
A	HoseMonster	4"		0		1100
Total Flow (USGPM)			0		1100	
Total Flow (L/second)			0		69	
Available Flow At Test Hydrant at 20 psi			0	USGPM	1,599	USGPM
			0	L/second	101	L/second

Average Projection at 20 PSI: 1,599 USGPM



Comments/Discrepencies/Diagram:

Watermark Solutions Limited
(705) 250-0368 www.watermark.ca

CROZIER
CONSULTING ENGINEERS

2800 High Point Drive | T. 905.875.0026
Suite 100, Milton, ON | F. 905.875.4915
L9T 6P4 | cfcrozier.ca

MINUTES

NAME OF MEETING: Meeting with Town & Region
DATE OF MINUTES: March 16, 2023
DATE OF MEETING: March 3, 2023
PROJECT NAME: Tullamore Lands
PROJECT NO.: 2022-5842
LOCATION: Microsoft Teams

ATTENDEES

NAME	COMPANY	EMAIL ADDRESS
John McGovern	Rice Group	John.McGovern@ricegroup.ca
Michael Mendes	Rice Group	Michael.Mendes@ricegroup.ca
Aarthi Thaya	Rice Group	Aarthi.Thaya@ricegroup.ca
Alex Masley	Region of Peel	Alex.Masley@peelregion.ca
William Turner	Region of Peel	William.Turner@peelregion.ca
Elizabeth Trent	Region of Peel	Elizabeth.Trent@peelregion.ca
Miriam Polga	Region of Peel	Miriam.Polga@peelregion.ca
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Justin Lee	Region of Peel	Justin.Lee@peelregion.ca
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Aleah Clarke	MHBC	Aclarke@mhbcplan.com
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Rita Juliao	Town of Caledon	Rita.Juliao@caledon.ca
Jim Firth	Crozier	Jfirth@cfcrozier.ca
Michael Linton	Crozier	Mlinton@cfcrozier.ca
Julie Scott	Crozier	Jscott@cfcrozier.ca

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ITEMS

ACTION / DISCUSSION	ACTION BY
1.0 Sanitary Servicing	
1.1 Summary of proposed sanitary design was provided by J.Scott (Crozier): - 600mm trunk sanitary will be constructed through the Tullamore Lands in Streets B and C. The proposed alignment of the trunk sewer is in line with the Region's Master Plan. Note, the Region has this trunk sewer project slated for 2035 in the Master Plan. - The 600mm trunk will connect under Mayfield Road to the trunk sewer in lands owned by DG Group. This portion of the trunk sewer is designed by RAND Engineering. - A 300mm sanitary sewer in Street A will connect to the existing 750mm trunk sewer on Airport Rd. - Blocks 1, 4 and 5 are proposed to outlet to the 300mm sewer. The remainder of the Blocks will outlet to the 600mm trunk sewer.	
1.2 A.Masley (Region) noted that RAND Engineering had previously shown a 525mm trunk sewer. The Region has advised RAND that the trunk sewer needs to be increased to 600mm.	
1.3 J.Scott (Crozier) noted that DG Group will not be constructing their portion of the trunk sewer for at least 4 years.	
1.4 J.Lee (Region) requested that Crozier look into connecting the 600mm trunk sewer along Mayfield to the existing Airport trunk sewer, since DG Group timelines are long. This connection option, like the remainder of the trunk sewer, would need to be front ended by Rice Group.	**Crozier**
1.5 J.Firth (Crozier) summarized work that had been done to calculate the overall drainage area to the 600mm trunk sewer. Crozier's work concludes that approximately 350 ha of land can outlet to the 600mm trunk sewer, which aligns with the Region's drainage area mapping that was received from A.Masley (Region) via email on February 9, 2023.	
1.6 J.McGovern (Rice) requested that the Region provide further clarification on the Region's front ending policy. A.Masley (Region) emailed the policy on March 3, 2023. Once reviewed, a follow-up call may take place between the Region & Rice.	
1.7 J.McGovern (Rice) confirmed that full build out of Streets A, B and C as well as the associated servicing will be constructed at the beginning of the project.	
1.8 Discussion took place regarding construction year versus date of use of the 600mm trunk sewer. Crozier to put together a figure with high-level phasing and approximate timing.	**Crozier**
2.0 Water Servicing	
2.1 Summary of proposed watermain design was provided by J.Scott (Crozier):	

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- Proposed watermains internal to the Tullamore Lands will connect to the existing watermains surrounding the property (existing 300mm on Airport & Mayfield, and existing 200mm on Torbram). - The proposed watermain will be 400mm in diameter along Street A, Street C and a portion of Street B. The remainder of Street B will be 300mm in diameter. - The proposed 400mm watermain aligns with the Region's Master Plan.	
2.2 J.Lee (Region) noted that the water model has been completed for the Tullamore Lands and that the entire site is serviceable based on the water and fire demands provided in the Crozier report dated January 2023.	
2.3 J.Lee (Region) noted that the water connection to service Block 7 should be located as close as possible to the Street B/C intersection & the watermain at the north part of Street B should be removed from the design to get rid of the dead-end.	**Crozier**
3.0 Stormwater	
3.1 Summary of proposed stormwater design was provided by J.Scott (Crozier): - All stormwater for the Tullamore Lands will drain to one of the three proposed stormwater management facilities. - The facilities will be located immediately north of Mayfield Rd and will provide quality and quantity control.	
3.2 D.Haines (Town) noted that conversations between Crozier, Town and MECP are ongoing regarding CLI ECA criteria.	
4.0 Transportation	
4.1 M.Linton (Crozier) provided an overview of the transportation design for the Tullamore Lands. As part of the design charette meeting that took place on Feb. 7, the Town provided feedback that there needs to be more detail provided regarding how the road network internal to Tullamore Lands aligns with the external network and the proposed Master Plan for the area. Crozier is working to update the Transportation Impact Study to incorporate these comments.	
4.2 Region transportation staff were unable to attend the meeting. A separate transportation focused meeting is to be coordinated.	**Crozier / Region / Town**
5.0 Overall Project Approval Plan	
5.1 The Town will ultimately require a Draft Plan and Subdivision Agreement. As per the agreed upon process by the Town, the project will undergo Site Plan first as part of which the roads and servicing will be private and protected by easements. The roads and servicing will be constructed to public standard. The Right-of-Ways will then be established in Draft Plan and through the subdivision agreement.	
5.2 C.Marzo (Region) noted that a Site Plan Agreement could be executed for the first block (Block 1) to facilitate building construction and that the required service corridors for Street A and Street B could be advanced as easements until such a time that the Subdivision Agreement is in place.	

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5.3 Region staff noted that all risk for advancing the servicing ahead of an executed Subdivision Agreement would be carried by the owner. J.McGovern (Rice) agreed.	
5.4 A.Masley (Region) suggested that in the absence of a subdivision agreement, a spine servicing agreement could be put in place. However, it is unlikely this will be required due to the Town's proposed approval process for the Tullamore Lands.	

These minutes are a record of the above noted meeting and are considered final. If there are any additions or revisions, please contact the undersigned prior to **March 17, 2023,** otherwise these minutes will be accepted as correct.

Thank you,

C.F. CROZIER & ASSOCIATES INC.



Julie Scott, P.Eng.
Project Manager

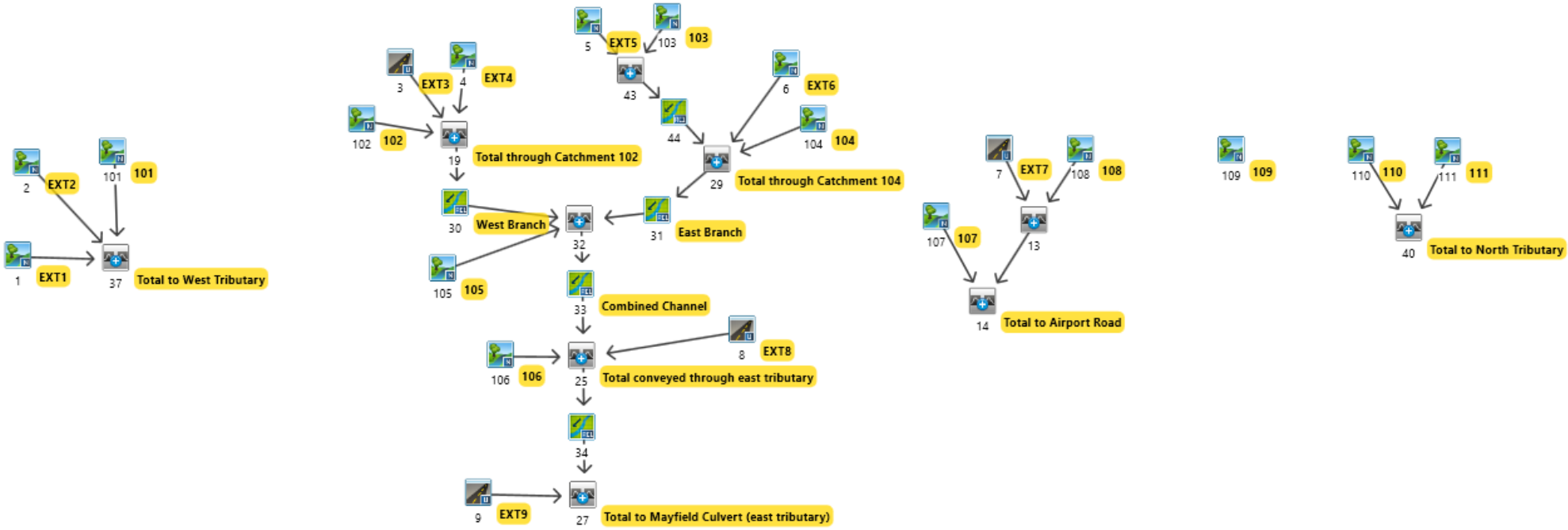
JS

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APPENDIX C

Pre-Development Stormwater Management



VO EXISTING MODEL SCHEMATIC
DATE: 2023-01-16
BY: IC
CHECK: RA

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**101**
Catchment AREA (ha)	**34.6**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 101

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	34.6
				0
Total Area Check				34.6

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveway		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.20	79			0.06	79					0.26

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			34.3	79							34.3

CN Calculations		
	Total Area	34.6
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	34.34	0.25	0.25
Impervious	0.20	0.90	0.01
Gravel	0.06	0.60	0.00
Total Subcatchment	**34.6**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	34.3	(Meadow)
Impervious	1	0.26	
Total	7.9	34.6	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
874	26	2.97%	2.3	0.40	0.61	0.37	0.37	0.47	0.31	0.95	0.64

Appropriate calculated time to peak:	0.64	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**102**
Catchment AREA (ha)	**46.7**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 102

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	51.2	23.9
Chinguacousy Clay Loam	CCL	C	48.8	22.8
Total Area Check				46.7

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveways		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		98				89					0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			23.9	84							23.9
CCL			22.8	79							22.8
				CN Calculations			Total Area				46.7
							Composite Curve Number				82

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	46.70	0.25	0.25
Impervious	0.00	0.90	0.00
Gravel	0.00	0.60	0.00
Total Subcatchment	**46.7**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	46.7	(Meadow)
Impervious	1	0.00	
Total	8.0	46.7	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
1245	16.5	1.33%	2.3	0.26	1.31	0.78	0.78	0.76	0.51	1.48	0.99

Appropriate calculated time to peak:	0.99	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**103**
Catchment AREA (ha)	**17.0**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 103

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	17.0
Total Area Check				17.0

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveways		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
		98				89					0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			17.0	84							17.0

CN Calculations		
	Total Area	17.0
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	17.00	0.25	0.25
Impervious	0.00	0.90	0.00
Gravel	0.00	0.60	0.00
Total Subcatchment	**17.0**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	17.0	(Meadow)
Impervious	1	0.00	
Total	8.0	17.0	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
810	13	1.60%	2.3	0.29	0.77	0.46	0.46	0.53	0.35	1.12	0.75

Appropriate calculated time to peak:	0.75	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**104**
Catchment AREA (ha)	**32.3**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 104

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	32.3
Total Area Check				32.3

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveways		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
		98				89					0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			32.3	84							32.3

CN Calculations		
	Total Area	32.3
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	32.30	0.25	0.25
Impervious	0.00	0.90	0.00
Gravel	0.00	0.60	0.00
Total Subcatchment	**32.3**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	32.3	(Meadow)
Impervious	1	0.00	
Total	8.0	32.3	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
1175	17	1.45%	2.3	0.28	1.18	0.71	0.71	0.73	0.49	1.40	0.94

Appropriate calculated time to peak:	0.94	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**105**
Catchment AREA (ha)	**13.4**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 105

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	15	2.0
Chinguacousy Clay Loam	CCL	C	85	11.4
Total Area Check				13.4

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveways		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		98				89					0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			2.0	84							2.0
CCL			11.4	79							11.4
				CN Calculations			Total Area				13.4
							Composite Curve Number				80

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	13.40	0.25	0.25
Impervious	0.00	0.90	0.00
Gravel	0.00	0.60	0.00
Total Subcatchment	**13.4**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	13.4	(Meadow)
Impervious	1	0.00	
Total	8.0	13.4	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
474	6	1.27%	2.3	0.26	0.51	0.31	0.31	0.33	0.22	0.93	0.62

Appropriate calculated time to peak:	0.62	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**106**
Catchment AREA (ha)	**31.0**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 106

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	31.0
				0.0
Total Area Check				31.0

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveways		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.55	79			1.40	79					1.95

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			29.1	79							29.1

CN Calculations		
	Total Area	31.0
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	29.1	0.25	0.23
Impervious	0.55	0.90	0.02
Gravel	1.40	0.60	0.03
Total Subcatchment	**31.0**	**-**	**0.28**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	29.1	(Meadow)
Impervious	1	1.95	
Total	7.6	31.0	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
1448	21.8	1.51%	2.3	0.28	1.43	0.86	0.86	0.90	0.60	1.49	1.00

Appropriate calculated time to peak:	1.00	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT1**
Catchment AREA (ha)	**0.6**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT1

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.6
				0
Total Area Check				0.6

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.10	79			0.00						0.10

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							0.5	79			0.5

CN Calculations	Total Area	0.6
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	0.50	0.25	0.21
Impervious	0.10	0.90	0.15
Total Subcatchment	**0.6**	**-**	**0.36**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	5	0.5	(Lawn)
Impervious	1	0.10	
Total	4.3	0.6	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
107	1	0.93%	2.3	0.22	0.13	0.08	0.08	0.11	0.07	0.43	0.29

Appropriate calculated time to peak:	0.29	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT2**
Catchment AREA (ha)	**1.3**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT2

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	1.3
				0
Total Area Check				1.3

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.20	79			0.00						0.20

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							1.1	79			1.1

CN Calculations		
	Total Area	1.3
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	1.10	0.25	0.21
Impervious	0.20	0.90	0.14
Total Subcatchment	**1.3**	**-**	**0.35**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	5	1.1	(Lawn)
Impervious	1	0.20	
Total	4.4	1.3	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
184	11	5.98%	2.3	0.56	0.09	0.05	0.05	0.12	0.08	0.31	0.21

Appropriate calculated time to peak:	0.21	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT3**
Catchment AREA (ha)	**3.4**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment EXT3

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	3.4
				0
Total Area Check				3.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	1.27	79				79					1.27

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			0.34	79			1.79	79			2.13

CN Calculations		
	Total Area	3.40
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	2.13	0.25	0.16
Impervious	1.27	0.90	0.34
Total Subcatchment	**3.4**	**-**	**0.49**

TIMP	**0.42**
XIMP	**0.22**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Meadow	8	0.34
Pervious	5	1.79
Impervious	1	1.27
Total	3.8	3.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	0.7	745	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT4**
Catchment AREA (ha)	**4.9**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT4

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	4.9
				0
Total Area Check				4.9

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		79			0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			4.9	79				79			4.9

CN Calculations		
	Total Area	4.9
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	4.90	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**4.9**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	4.9	(Meadow)
Impervious	1	0.00	
Total	8.0	4.9	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
180	1	0.56%	2.3	0.17	0.29	0.17	0.17	0.16	0.11	0.75	0.50

Appropriate calculated time to peak:	0.50	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT5**
Catchment AREA (ha)	**0.9**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT5

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.9
				0
Total Area Check				0.9

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.9	84							0.9

CN Calculations		
	Total Area	0.9
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	0.90	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**0.9**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	0.9	(Meadow)
Impervious	1	0.00	
Total	8.0	0.9	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
103	0.85	0.83%	2.3	0.21	0.14	0.08	0.08	0.10	0.07	0.50	0.33

Appropriate calculated time to peak:	0.33	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**EXT6**
Catchment AREA (ha)	**0.5**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT6

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.5
				0
Total Area Check				0.5

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.5	84							0.5

CN Calculations	Total Area	0.5
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	0.50	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**0.5**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	0.5	(Meadow)
Impervious	1	0.00	
Total	8.0	0.5	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
79	2	2.53%	2.3	0.37	0.06	0.04	0.04	0.07	0.04	0.30	0.20

Appropriate calculated time to peak:	0.20	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**107**
Catchment AREA (ha)	**1.7**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 107

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	1.7
				0
Total Area Check				1.7

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			1.7	84							1.7

CN Calculations		
	Total Area	1.7
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	1.7	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**1.7**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	1.7	(Meadow)
Impervious	1	0.00	
Total	8.0	1.7	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
75	0.5	0.67%	2.3	0.19	0.11	0.07	0.07	0.07	0.05	0.46	0.31

Appropriate calculated time to peak:	0.31	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME **EXT7**
Catchment AREA (ha) **1.4**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT7

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	1.4
				0
Total Area Check				1.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC		98			1.40	84					1.40
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC								84			0.00
			CN Calculations				Total Area				1.40
							Composite Curve Number				84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.00	0.25	0.00
Gravel	1.40	0.60	0.60
Total Subcatchment	**1.4**	**-**	**0.60**

TIMP	**0.57**
XIMP	**0.37**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.00
Gravel	2.5	1.40
Impervious	1	0.00
Total	2.5	1.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1.2	74	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME **EXT8**
Catchment AREA (ha) **1.4**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT8

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	1.4
				0
Total Area Check				1.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		98			1.40	79					1.40

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL								84			0.00

CN Calculations		
	Total Area	1.40
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.00	0.25	0.00
Gravel	1.40	0.60	0.60
Total Subcatchment	**1.4**	**-**	**0.60**

TIMP	**0.57**
XIMP	**0.37**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.00
Gravel	2.5	1.40
Impervious	1	0.00
Total	2.5	1.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	2	90	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME **EXT9**
Catchment AREA (ha) **0.9**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment EXT9

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.9
				0
Total Area Check				0.9

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.45	79				79					0.45

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Roadside Ditch		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							0.45	79			0.45

CN Calculations		
	Total Area	0.90
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.45	0.25	0.13
Impervious	0.45	0.90	0.45
Total Subcatchment	**0.9**	**-**	**0.58**

TIMP **0.54**
XIMP **0.34**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.45
Impervious	1	0.45
Total	3.0	0.90

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	2	313	0.25
Impervious	1.0	1	309	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**108**
Catchment AREA (ha)	**11.5**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 108

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	96.9	11.1
Chinguacousy Clay Loam	CCL	C	3.1	0.36
Total Area Check				11.5

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			11.1	84							11.1
CCL			0.36	79							0.36
				CN Calculations			Total Area				11.5
							Composite Curve Number				84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	11.5	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**11.5**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	11.5	(Meadow)
Impervious	1	0.00	
Total	8.0	11.5	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
448	5	1.12%	2.3	0.24	0.51	0.31	0.31	0.33	0.22	0.94	0.63

Appropriate calculated time to peak:	0.63	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**109**
Catchment AREA (ha)	**4.9**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 109

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	64.6	3.2
Chinguacousy Clay Loam	CCL	C	35.4	1.7
Total Area Check				4.9

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			3.2	84							3.2
			1.7	79							1.7
				CN Calculations			Total Area				4.9
							Composite Curve Number				82

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	4.9	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**4.9**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	4.9	(Meadow)
Impervious	1	0.00	
Total	8.0	4.9	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
295	2.8	0.95%	2.3	0.22	0.37	0.22	0.22	0.24	0.16	0.81	0.54

Appropriate calculated time to peak:	0.54	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**110**
Catchment AREA (ha)	**9.7**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 110

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	9.7
Total Area Check				9.7

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			9.7	84							9.7
											0.0
			CN Calculations		Total Area						9.7
					Composite Curve Number						84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	9.7	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**9.7**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	9.7	(Meadow)
Impervious	1	0.00	
Total	8.0	9.7	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
466	14.3	3.07%	2.3	0.40	0.32	0.19	0.19	0.28	0.19	0.69	0.46

Appropriate calculated time to peak:	0.46	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-16
By: IC
Check: RA

Catchment NAME	**111**
Catchment AREA (ha)	**0.1**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment 111

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.1
Total Area Check				0.1

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.1	84							0.1
											0.0
			CN Calculations		Total Area						0.1
					Composite Curve Number						84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	0.1	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**0.1**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	0.1	(Meadow)
Impervious	1	0.00	
Total	8.0	0.1	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
70	0.5	0.71%	2.3	0.19	0.10	0.06	0.06	0.09	0.06	0.43	0.29

Appropriate calculated time to peak:	0.29	Appropriate Method:	Airport

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         VV     I    SSSSS  UUUUU  A   A  LLLLL

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       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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***** S U M M A R Y O U T P U T *****

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Output filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\7b0e0400-5537-4631-a46e-dae14feceae4\sce
Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\7b0e0400-5537-4631-a46e-dae14feceae4\sce

DATE: 01-19-2023 TIME: 11:21:41

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 1. 2-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.05  2.92  12.51 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.21  3.42  12.52 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.08  2.75  23.18 0.64   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.23  3.25  13.67  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.27  3.25  13.54  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.08  3.33  10.77 0.30   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.07  3.25   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
```

```
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    0.54  3.92  10.77 0.30   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.08  2.83  14.73 0.41   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    0.57  3.92  11.03  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    0.63  3.83  10.89  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    0.61  4.08  10.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.02  3.00  12.51 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.27  3.58  12.52 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.29  3.58  12.52  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.27  3.75  12.52  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.02  2.83  12.49 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.45  3.83  12.52 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    0.72  3.83  12.52  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    0.73  3.83  12.52  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    0.62  4.42  12.52  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.18  3.42   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    0.75  3.92  10.59  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    1.34  4.17  11.41  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    1.32  4.33  11.41  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB NASHYD         0106  1  5.0   31.00    0.31  3.92   9.58 0.27   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.07  2.75  21.55 0.60   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    1.63  4.25  11.03  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    1.64  4.25  11.13  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    1.60  4.42  11.13  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.03  2.75  20.91 0.58   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    1.61  4.42  11.19  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    0.45  3.50   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.01  2.92  10.12 0.28   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.03  2.83  10.06 0.28   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    0.46  3.42   9.37  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    0.47  3.42   9.40  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.21  3.17  12.52 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\db9a5a13-7be7-4412-a2a0-d3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.00  2.92  12.50 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.21  3.17  12.52  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
```

```
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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***** S U M M A R Y O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\08611d54-e099-48de-877c-3b5f4870fbc2\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\08611d54-e099-48de-877c-3b5f4870fbc2\sce


DATE: 01-19-2023                          TIME: 11:21:42

USER:


COMMENTS: _____________________________________________________________


  ************************************************
  ** SIMULATION : 2. 5-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.08  2.92  21.28 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.36  3.33  21.29 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.12  2.75  33.23 0.69   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.40  3.25  22.58  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.46  3.25  22.43  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.15  3.25  18.72 0.39   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.13  3.25  16.58 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    0.95  3.83  18.73 0.39   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
```

```
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.14  2.83  22.08 0.46   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.00  3.83  18.95  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.10  3.75  18.74  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.07  4.00  18.74  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.04  2.92  21.28 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.47  3.50  21.29 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.50  3.50  21.29  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.49  3.58  21.29  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  2.83  21.25 0.44   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.78  3.75  21.29 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    1.26  3.67  21.29  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    1.27  3.67  21.29  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.09  4.17  21.29  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.32  3.42  16.58 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    1.33  3.83  18.32  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    2.38  4.00  19.58  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    2.36  4.17  19.58  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.56  3.92  16.85 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.11  2.75  30.99 0.65   0.000
    [I%=37.0:S%= 2.00]
```

```
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    2.90  4.08  19.02  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    2.91  4.08  19.13  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    2.85  4.33  19.13  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  2.75  30.31 0.63   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    2.86  4.33  19.19  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    0.81  3.42  16.58 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.02  2.92  17.04 0.36   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.06  2.83  16.96 0.35   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    0.83  3.42  16.59  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    0.85  3.42  16.60  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.36  3.08  21.29 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0f314db6-9a33-46d8-994c-cc
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.00  2.92  21.27 0.44   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.37  3.08  21.29  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
```

Output filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\68c19bbc-7a5e-491a-8d89-634bde2043b4\sce
Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\68c19bbc-7a5e-491a-8d89-634bde2043b4\sce

DATE: 01-19-2023 TIME: 11:21:43

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 25mm                          **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.02  2.08   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.09  2.58   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.08  1.67  14.45 0.58   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.11  2.50   6.56  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.12  2.33   6.45  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.04  2.42   4.68 0.19   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.03  2.42   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0102  1  5.0   46.70    0.23  3.08   4.68 0.19   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.07  1.83   8.73 0.35   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    0.25  3.00   4.95  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    0.27  2.92   4.86  n/a   0.000
*
```

```
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    0.27  3.17   4.86  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.01  2.17   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.12  2.75   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.13  2.75   5.60  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.12  3.00   5.60  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.01  1.92   5.59 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.20  3.00   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    0.32  3.00   5.60  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    0.32  3.00   5.60  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    0.27  3.67   5.60  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.08  2.58   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    0.33  3.08   4.69  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    0.58  3.33   5.08  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    0.58  3.50   5.08  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.14  3.08   4.14 0.17   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.08  1.67  13.43 0.54   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    0.71  3.42   4.88  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    0.71  3.42   4.96  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    0.70  3.67   4.96  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
```

```
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  1.67  12.87 0.51   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    0.71  3.67   5.01  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0101  1  5.0   34.60    0.19  2.58   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.01  2.00   4.86 0.19   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.02  1.92   4.81 0.19   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    0.19  2.58   3.99  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    0.20  2.58   4.02  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.09  2.33   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\72cc001e-b325-4085-bfb4-8c
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.00  2.08   5.59 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.10  2.33   5.60  n/a   0.000
*
 FINISH

================================================================================================================

================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\144b30d4-2e1b-4514-92e6-f91cdba69394\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\144b30d4-2e1b-4514-92e6-f91cdba69394\sce


DATE: 01-19-2023                          TIME: 11:21:42

USER:
```

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 3. 10-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.11  2.92  27.62 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.47  3.33  27.63 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.14  2.75  40.18 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.52  3.25  28.99  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.60  3.25  28.83  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.19  3.25  24.58 0.44   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.18  3.17  21.98 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.25  3.83  24.58 0.44   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.18  2.83  27.41 0.49   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.32  3.75  24.78  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.45  3.75  24.53  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.41  3.92  24.53  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB NASHYD         0005  1  5.0    0.90    0.05  2.92  27.62 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.62  3.50  27.63 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.65  3.50  27.63  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.64  3.58  27.63  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.04  2.75  27.57 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.02  3.75  27.63 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    1.65  3.67  27.63  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    1.66  3.67  27.62  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.46  4.08  27.62  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.43  3.33  21.99 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    1.77  3.75  24.03  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    3.17  4.00  25.56  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    3.14  4.08  25.56  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.74  3.83  22.27 0.40   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.13  2.75  37.59 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    3.86  4.08  24.88  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    3.88  4.08  25.00  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    3.79  4.25  25.00  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.05  2.75  36.88 0.66   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    3.80  4.25  25.07  n/a   0.000
*
    READ STORM                 15.0
```

```
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    1.09  3.42  21.99 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.03  2.92  22.20 0.40   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.07  2.83  22.11 0.40   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.11  3.42  21.99  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.14  3.33  21.99  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.48  3.08  27.62 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0eedfef8-cbca-4591-9724-01
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  2.92  27.60 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.48  3.08  27.62  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\15a1336e-7783-4955-8c7c-5b754110648c\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\15a1336e-7783-4955-8c7c-5b754110648c\sce


DATE: 01-19-2023                          TIME: 11:21:42

USER:


COMMENTS: _____________________________________________________________


  ************************************************
  ** SIMULATION : 4. 25-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms
```

```
      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.14  2.92  35.95 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.62  3.33  35.96 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.18  2.75  49.12 0.75   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.68  3.25  37.39  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.78  3.25  37.22  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.26  3.25  32.38 0.49   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.24  3.17  29.26 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.66  3.83  32.38 0.49   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.23  2.83  34.47 0.53   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.75  3.75  32.53  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.92  3.67  32.23  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.88  3.83  32.23  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  2.92  35.95 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.82  3.50  35.96 0.55   0.000
    [CN=88.0         ]
```

```
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.86  3.42  35.96  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.84  3.58  35.96  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.05  2.75  35.89 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.33  3.75  35.96 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    2.16  3.67  35.96  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.18  3.67  35.96  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.96  4.00  35.96  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.58  3.33  29.26 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    2.36  3.75  31.65  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    4.27  3.92  33.49  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    4.22  4.00  33.49  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.99  3.83  29.56 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.17  2.75  46.12 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    5.20  4.00  32.68  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    5.22  4.00  32.80  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    5.09  4.17  32.80  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.07  2.75  45.40 0.69   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    5.11  4.17  32.87  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    1.47  3.33  29.26 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
```

```
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.04  2.83  29.15 0.44   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.10  2.83  29.04 0.44   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.49  3.33  29.26  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.53  3.33  29.25  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.63  3.08  35.96 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0feefe98-da12-4596-a442-6f
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  2.83  35.94 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.64  3.08  35.96  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\ee483ae8-b646-4613-8fad-68f8b5ac0565\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\ee483ae8-b646-4613-8fad-68f8b5ac0565\sce


DATE: 01-19-2023                          TIME: 11:21:42

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 5. 50-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.16  2.92  42.39 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
```

```
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.73  3.33  42.40 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.21  2.75  55.92 0.77   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.80  3.25  43.87  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.92  3.17  43.70  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.31  3.17  38.47 0.53   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.29  3.17  34.99 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.98  3.75  38.47 0.53   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.27  2.83  39.99 0.55   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    2.08  3.75  38.57  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    2.29  3.67  38.25  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    2.25  3.83  38.25  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.08  2.92  42.39 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.96  3.42  42.40 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    1.02  3.42  42.40  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    1.00  3.58  42.40  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
```

```
*  CALIB NASHYD         0006  1  5.0    0.50    0.06  2.75  42.32 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB NASHYD         0104  1  5.0   32.30    1.57  3.67  42.40 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    2.56  3.67  42.40  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.58  3.67  42.40  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    2.37  3.92  42.40  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB NASHYD         0105  1  5.0   13.40    0.70  3.33  34.99 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    2.83  3.67  37.61  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    5.15  3.83  39.65  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    5.10  4.00  39.65  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB NASHYD         0106  1  5.0   31.00    1.19  3.83  35.30 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB STANDHYD       0008  1  5.0    1.40    0.19  2.75  52.65 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    6.27  3.92  38.75  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    6.30  3.92  38.88  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    6.16  4.17  38.88  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB STANDHYD       0009  1  5.0    0.90    0.08  2.75  51.92 0.71   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    6.19  4.17  38.96  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB NASHYD         0101  1  5.0   34.60    1.76  3.33  34.99 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
*  CALIB NASHYD         0001  1  5.0    0.60    0.05  2.83  34.63 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB NASHYD         0002  1  5.0    1.30    0.12  2.83  34.52 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.79  3.33  34.98  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.84  3.33  34.96  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.75  3.08  42.40 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\44eff319-856a-4063-9886-b2
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  2.83  42.38 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.75  3.08  42.40  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\cadf33d8-c13a-4ed1-95b4-f58ac6b592ac\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\cadf33d8-c13a-4ed1-95b4-f58ac6b592ac\sce


DATE: 01-19-2023                          TIME: 11:21:42

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 6. 100-Year                   **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.19  2.92  48.87 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.84  3.33  48.89 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                15.0
```

```
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.24  2.75  62.71 0.78   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.92  3.25  50.39  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    1.06  3.17  50.21  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.36  3.17  44.64 0.56   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.34  3.17  40.83 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    2.30  3.75  44.64 0.56   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.33  2.83  45.59 0.57   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    2.41  3.75  44.70  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    2.65  3.67  44.36  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    2.61  3.83  44.36  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.10  2.92  48.88 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    1.12  3.42  48.89 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    1.17  3.42  48.89  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    1.16  3.50  48.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.07  2.75  48.80 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.82  3.67  48.89 0.61   0.000
    [CN=88.0         ]
```

```
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    2.96  3.58  48.89  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.98  3.58  48.89  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    2.82  3.83  48.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.82  3.33  40.83 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    3.31  3.67  43.67  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    6.08  3.83  45.89  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    6.02  3.92  45.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    1.39  3.83  41.15 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.22  2.75  59.19 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    7.40  3.92  44.91  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    7.43  3.92  45.04  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    7.28  4.08  45.04  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.09  2.75  58.45 0.73   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    7.30  4.08  45.12  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    2.07  3.33  40.83 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.06  2.83  40.23 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.14  2.83  40.11 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    2.10  3.33  40.82  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    2.16  3.33  40.79  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
```

```
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.86  3.08  48.89 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\3175904e-a092-4b96-b9d7-f093cd2265fe\0adea8e9-bd35-4c5a-9678-6e
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  2.83  48.86 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.87  3.08  48.89  n/a   0.000
*
```

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```
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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\a888a27a-8eba-494d-bd7b-108fa2eb6f84\sce
Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\a888a27a-8eba-494d-bd7b-108fa2eb6f84\sce

DATE: 01-19-2023 TIME: 11:26:25

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 1. 2-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.04  5.33  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.21  5.67  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.05  5.25  28.22 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.24  5.58  18.08  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.27  5.50  17.93  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.08  5.58  14.66 0.35   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.08  5.50  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
```

```
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    0.56  6.25  14.67 0.35   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.07  5.33  18.36 0.44   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    0.60  6.17  14.92  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    0.66  6.08  14.73  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    0.64  6.33  14.73  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.02  5.33  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.28  5.83  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.29  5.75  16.84  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.28  6.00  16.84  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.01  5.25  16.81 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.47  6.08  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    0.75  6.08  16.84  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    0.75  6.08  16.84  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    0.66  6.67  16.84  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.18  5.67  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    0.79  6.17  14.37  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    1.42  6.42  15.42  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    1.41  6.58  15.42  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB NASHYD         0106  1  5.0   31.00    0.33  6.25  13.13 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.05  5.25  26.27 0.63   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    1.73  6.50  14.95  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    1.75  6.50  15.05  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    1.72  6.75  15.05  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.02  5.25  25.60 0.61   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    1.73  6.75  15.12  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    0.46  5.67  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.01  5.33  13.50 0.32   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.03  5.25  13.43 0.32   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    0.47  5.67  12.89  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    0.49  5.67  12.91  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.21  5.42  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\68e51e3d-c726-4ca9-a403-53
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.00  5.33  16.83 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.21  5.42  16.84  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
```

```
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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***** S U M M A R Y O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
Output filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\903a11e9-87e1-4be1-be48-a77ada4234fc\sce
Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\903a11e9-87e1-4be1-be48-a77ada4234fc\sce

DATE: 01-19-2023 TIME: 11:26:24

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 2. 5-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.07  5.33  26.54 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.34  5.58  26.55 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.07  5.25  39.01 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.38  5.50  27.90  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.44  5.50  27.74  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.14  5.50  23.58 0.43   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.13  5.50  21.06 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    0.93  6.17  23.59 0.43   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
```

```
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.10  5.33  26.50 0.49   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    0.98  6.08  23.78  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.08  6.00  23.54  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.05  6.25  23.54  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.04  5.33  26.54 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.46  5.75  26.55 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.48  5.75  26.55  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.47  5.83  26.55  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.02  5.25  26.50 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.75  6.00  26.55 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    1.22  5.92  26.55  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    1.23  5.92  26.55  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.08  6.50  26.55  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.31  5.58  21.06 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    1.31  6.08  23.05  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    2.35  6.33  24.54  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    2.33  6.42  24.54  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.55  6.17  21.34 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.07  5.25  36.48 0.67   0.000
    [I%=37.0:S%= 2.00]
```

```
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    2.87  6.42  23.88  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    2.89  6.42  24.00  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    2.84  6.67  24.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.03  5.25  35.77 0.66   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    2.85  6.58  24.07  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    0.78  5.67  21.06 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.02  5.33  21.32 0.39   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.04  5.25  21.23 0.39   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    0.79  5.67  21.07  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    0.82  5.58  21.07  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.34  5.42  26.55 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\cf7c2ea9-969b-4145-ac72-ae
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.00  5.33  26.53 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.34  5.42  26.55  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
```

Output filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\ab6eaa4b-e2f1-4843-9d3c-2a4c30662aa8\sce
Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\ab6eaa4b-e2f1-4843-9d3c-2a4c30662aa8\sce

DATE: 01-19-2023 TIME: 11:26:25

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 3. 10-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.09  5.33  33.49 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.43  5.58  33.50 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.09  5.25  46.49 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.48  5.50  34.91  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.55  5.42  34.74  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.18  5.50  30.07 0.48   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.16  5.50  27.09 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.19  6.08  30.07 0.48   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.13  5.33  32.37 0.52   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.26  6.00  30.23  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.38  5.92  29.95  n/a   0.000
*
```

```
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.36  6.17  29.95  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.05  5.33  33.49 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.58  5.75  33.50 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.61  5.67  33.50  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.60  5.83  33.50  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  5.25  33.44 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    0.96  6.00  33.50 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    1.56  5.92  33.50  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    1.57  5.92  33.50  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.40  6.33  33.50  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.40  5.58  27.10 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    1.69  6.00  29.39  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    3.05  6.25  31.14  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    3.02  6.42  31.14  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.71  6.08  27.39 0.44   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.08  5.25  43.61 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    3.72  6.33  30.37  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    3.74  6.33  30.49  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    3.67  6.58  30.49  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  5.25  42.89 0.68   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    3.69  6.58  30.56  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    1.02  5.58  27.10 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.02  5.33  27.08 0.43   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.06  5.25  26.98 0.43   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.03  5.58  27.10  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.06  5.58  27.09  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.43  5.42  33.50 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1f6f9260-6cbf-4f8c-86aa-fe
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  5.25  33.48 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.43  5.42  33.50  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\7b85761f-8f47-4c73-9bfc-617b13baba56\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\7b85761f-8f47-4c73-9bfc-617b13baba56\sce


DATE: 01-19-2023                          TIME: 11:26:24

USER:


COMMENTS: _____________________________________________________________
```

```
  **********************************************
  ** SIMULATION : 4. 25-Year                  **
  **********************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.11  5.33  42.48 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.55  5.58  42.49 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.11  5.25  56.01 0.77   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.61  5.50  43.96  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.71  5.42  43.79  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.23  5.50  38.55 0.53   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.21  5.42  35.06 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.54  6.08  38.55 0.53   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.16  5.33  40.06 0.55   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.63  6.00  38.66  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    1.79  5.92  38.34  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    1.76  6.08  38.34  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.06  5.33  42.48 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
```

```
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.74  5.67  42.49 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.78  5.67  42.49  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.77  5.83  42.49  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  5.25  42.41 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.23  5.92  42.49 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    1.99  5.92  42.49  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.00  5.92  42.49  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    1.82  6.25  42.49  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.52  5.58  35.07 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    2.20  6.00  37.70  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    3.98  6.17  39.74  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    3.94  6.33  39.74  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    0.93  6.08  35.38 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.10  5.25  52.74 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    4.86  6.25  38.84  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    4.89  6.25  38.97  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    4.79  6.50  38.97  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.05  5.25  52.00 0.71   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    4.81  6.50  39.04  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB NASHYD         0101  1  5.0   34.60    1.33  5.58  35.07 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.03  5.25  34.71 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.07  5.25  34.59 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.35  5.58  35.06  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.39  5.58  35.04  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.55  5.42  42.49 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\ea7eb59c-1167-4ff2-9a3e-60
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  5.25  42.47 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.55  5.42  42.49  n/a   0.000
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\9a2188bc-2eed-40b2-865c-75991908abda\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\9a2188bc-2eed-40b2-865c-75991908abda\sce


DATE: 01-19-2023                          TIME: 11:26:25

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 5. 50-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
```

```
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.13  5.25  49.33 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.65  5.58  49.35 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.12  5.25  63.18 0.78   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.71  5.50  50.85  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.82  5.42  50.67  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.27  5.50  45.07 0.56   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.25  5.42  41.24 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    1.81  6.00  45.07 0.56   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.19  5.33  45.99 0.57   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    1.92  6.00  45.14  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    2.11  5.83  44.79  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    2.07  6.08  44.79  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  5.33  49.33 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.86  5.67  49.35 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    0.91  5.67  49.35  n/a   0.000
*
```

```
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    0.89  5.83  49.35  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.04  5.25  49.25 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.43  5.92  49.35 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    2.32  5.83  49.35  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.33  5.83  49.35  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    2.16  6.25  49.35  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.62  5.58  41.24 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    2.60  5.92  44.09  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    4.72  6.08  46.33  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    4.68  6.25  46.33  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    1.09  6.08  41.57 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.12  5.25  59.65 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    5.76  6.25  45.35  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    5.79  6.17  45.48  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    5.69  6.42  45.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.06  5.25  58.91 0.73   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    5.72  6.42  45.56  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    1.57  5.58  41.24 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.04  5.25  40.63 0.50   0.000
    [CN=79.0         ]
```

```
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.08  5.25  40.51 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.60  5.58  41.23  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.64  5.58  41.21  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.63  5.42  49.34 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\1ee1fc54-6bb7-4e11-8fd8-13
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  5.25  49.32 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.64  5.42  49.34  n/a   0.000
*
==============================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\eba1325d-a0ef-4cd4-932a-7ef0adcfce46\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\eba1325d-a0ef-4cd4-932a-7ef0adcfce46\sce


DATE: 01-19-2023                          TIME: 11:26:25

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 6. 100-Year                   **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.14  5.25  56.30 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
```

```
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0108  1  5.0   11.50    0.74  5.58  56.32 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.14  5.25  70.42 0.80   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    0.81  5.50  57.85  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    0.94  5.42  57.67  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.31  5.50  51.74 0.58   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.29  5.42  47.59 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0102  1  5.0   46.70    2.09  6.00  51.74 0.58   0.000
    [CN=85.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.22  5.33  52.08 0.59   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    2.20  6.00  51.77  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    2.42  5.83  51.39  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    2.39  6.08  51.39  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  5.33  56.30 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0103  1  5.0   17.00    0.99  5.67  56.32 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    1.04  5.67  56.32  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    1.03  5.75  56.32  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.05  5.25  56.21 0.63   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
```

```
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0104  1  5.0   32.30    1.64  5.92  56.32 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    2.66  5.83  56.32  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    2.67  5.83  56.32  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    2.52  6.17  56.32  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0105  1  5.0   13.40    0.72  5.58  47.59 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    3.01  5.92  50.65  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10    5.48  6.00  53.06  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10    5.44  6.17  53.06  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0106  1  5.0   31.00    1.26  6.00  47.93 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.13  5.25  66.65 0.75   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10    6.70  6.17  52.00  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50    6.74  6.17  52.14  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50    6.62  6.33  52.14  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.06  5.25  65.90 0.74   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40    6.66  6.33  52.22  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0101  1  5.0   34.60    1.82  5.58  47.59 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.04  5.25  46.74 0.53   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.10  5.25  46.61 0.53   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
```

```
                                                                    12-Hour AES Storms
    ADD [  0001+  0101]  0037  3  5.0   35.20    1.85  5.58  47.58  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    1.90  5.58  47.54  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0110  1  5.0    9.70    0.72  5.42  56.32 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\1a6d36d1-5922-406b-af9a-2c206f2f1b99\7bbbe169-eb02-46cf-ad1d-06
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01  5.25  56.29 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    0.73  5.42  56.32  n/a   0.000
*
 FINISH

================================================================================================================
```

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```
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***** S U M M A R Y O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\fbc8cf88-53d3-4c5f-ba47-b58f5f66a5b0\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\de76626f-64c2-4ea8-951a-5c14ad5b5394\fbc8cf88-53d3-4c5f-ba47-b58f5f66a5b0\sce


DATE: 01-19-2023                          TIME: 11:27:59

USER:


COMMENTS: _____________________________________________________________


  ************************************************
  ** SIMULATION : Regional                      **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                   min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 ** CALIB NASHYD         0107  1  5.0    1.70    0.24 10.00 188.92 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.31]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 ** CALIB NASHYD         0108  1  5.0   11.50    1.39 10.50 188.98 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.63]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.20 10.00 200.56 0.95   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0108+  0007]  0013  3  5.0   12.90    1.54 10.42 190.23  n/a   0.000
*
    ADD [  0107+  0013]  0014  3  5.0   14.60    1.75 10.33 190.08  n/a   0.000
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0109  1  5.0    4.90    0.61 10.33 186.51 0.88   0.000
    [CN=93.0         ]
    [ N = 3.0:Tp 0.54]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.62 10.25 181.62 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 0.50]
```

```
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0102  1  5.0   46.70    5.00 11.08 186.52 0.88   0.000
    [CN=93.0         ]
    [ N = 3.0:Tp 0.99]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB STANDHYD       0003  1  5.0    3.40    0.45 10.00 184.11 0.87   0.000
    [I%=22.0:S%= 2.00]
*
    ADD [  0102+  0003]  0019  3  5.0   50.10    5.34 11.08 186.36  n/a   0.000
*
    ADD [  0019+  0004]  0019  1  5.0   55.00    5.88 11.00 185.93  n/a   0.000
*
    CHANNEL[ 2:  0019]   0030  1  5.0   55.00    5.85 11.08 185.93  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.13 10.08 188.93 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0103  1  5.0   17.00    1.96 10.75 188.98 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.75]
*
    ADD [  0103+  0005]  0043  3  5.0   17.90    2.06 10.67 188.98  n/a   0.000
*
    CHANNEL[ 2:  0043]   0044  1  5.0   17.90    2.05 10.83 188.98  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.07 10.00 188.62 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0104  1  5.0   32.30    3.52 11.08 188.98 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.94]
*
    ADD [  0104+  0044]  0029  3  5.0   50.20    5.56 11.00 188.98  n/a   0.000
*
    ADD [  0029+  0006]  0029  1  5.0   50.70    5.61 11.00 188.98  n/a   0.000
*
    CHANNEL[ 2:  0029]   0031  1  5.0   50.70    5.57 11.17 188.97  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0105  1  5.0   13.40    1.60 10.42 181.63 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 0.62]
*
    ADD [  0105+  0030]  0032  3  5.0   68.40    7.35 11.08 185.09  n/a   0.000
*
    ADD [  0032+  0031]  0032  1  5.0  119.10   12.92 11.08 186.74  n/a   0.000
*
    CHANNEL[ 2:  0032]   0033  1  5.0  119.10   12.90 11.17 186.74  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
```

```
 *  CALIB NASHYD         0106  1  5.0   31.00    3.28 11.17 182.03 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 1.00]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB STANDHYD       0008  1  5.0    1.40    0.20 10.00 198.30 0.94   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0106+  0033]  0025  3  5.0  150.10   16.18 11.17 185.77  n/a   0.000
*
    ADD [  0025+  0008]  0025  1  5.0  151.50   16.28 11.08 185.89  n/a   0.000
*
    CHANNEL[ 2:  0025]   0034  1  5.0  151.50   16.31 11.17 185.89  n/a   0.000
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.11 10.00 197.18 0.93   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0034+  0009]  0027  3  5.0  152.40   16.39 11.17 185.95  n/a   0.000
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0101  1  5.0   34.60    4.10 10.50 181.63 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 0.64]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0001  1  5.0    0.60    0.08 10.00 182.77 0.86   0.000
    [CN=90.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0002  1  5.0    1.30    0.19 10.00 182.47 0.86   0.000
    [CN=90.0         ]
    [ N = 3.0:Tp 0.21]
*
    ADD [  0001+  0101]  0037  3  5.0   35.20    4.17 10.50 181.65  n/a   0.000
*
    ADD [  0037+  0002]  0037  1  5.0   36.50    4.31 10.50 181.68  n/a   0.000
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0110  1  5.0    9.70    1.27 10.17 188.97 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.46]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\6a1c2678-ded1-4e00-9456-b49dc7035e8b\52947bbd-d3f1-4008-9246-d3
    remark: Hazel
*
 *  CALIB NASHYD         0111  1  5.0    0.10    0.01 10.00 188.89 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.29]
*
    ADD [  0110+  0111]  0040  3  5.0    9.80    1.29 10.17 188.97  n/a   0.000
*
 FINISH

================================================================================================================
```

Summary of Pre-Development Peak Flow VO Results

Pre-Development Peak Runoff Directed to the West Tributary (6-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)			
	101	EXT1	EXT2	Total
2-year	0.448	0.013	0.034	**0.469**
5-year	0.815	0.023	0.057	**0.851**
10-year	1.091	0.030	0.075	**1.141**
25-year	1.466	0.040	0.099	**1.534**
50-year	1.764	0.047	0.117	**1.843**
100-year	2.068	0.055	0.136	**2.158**
Regional	4.099	0.013	0.034	**4.307**

Pre-Development Peak Runoff Directed to the West Tributary (12-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)			
	101	EXT1	EXT2	Total
2-year	0.464	0.012	0.028	**0.485**
5-year	0.782	0.019	0.044	**0.817**
10-year	1.016	0.024	0.056	**1.065**
25-year	1.331	0.031	0.071	**1.392**
50-year	1.573	0.036	0.083	**1.644**
100-year	1.823	0.041	0.095	**1.904**

External Pre-Development Peak Runoff Directed to the East Tributary (6-Hour Storm)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)						
	EXT3	EXT4	EXT5	EXT6	EXT8	EXT9	Total
2-year	0.084	0.073	0.023	0.017	0.072	0.030	**0.299**
5-year	0.135	0.133	0.041	0.029	0.109	0.043	**0.490**
10-year	0.177	0.178	0.054	0.038	0.134	0.053	**0.634**
25-year	0.228	0.240	0.071	0.050	0.167	0.067	**0.823**
50-year	0.270	0.289	0.084	0.059	0.192	0.078	**0.972**
100-year	0.328	0.339	0.098	0.068	0.223	0.091	**1.147**
Regional	0.452	0.621	0.126	0.073	0.203	0.112	**1.587**

External Pre-Development Peak Runoff Directed to the East Tributary (12-Hour Storm)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)						
	EXT3	EXT4	EXT5	EXT6	EXT8	EXT9	Total
2-year	0.067	0.075	0.023	0.014	0.049	0.021	**0.249**
5-year	0.102	0.127	0.036	0.022	0.070	0.031	**0.388**
10-year	0.130	0.164	0.045	0.028	0.085	0.038	**0.490**
25-year	0.164	0.214	0.057	0.035	0.103	0.048	**0.621**
50-year	0.191	0.253	0.066	0.040	0.117	0.056	**0.723**
100-year	0.222	0.292	0.075	0.045	0.131	0.063	**0.828**

Internal Pre-Development Peak Runoff Directed to the East Tributary (6-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)						
	102	**103**	**104**	**105**	**106**	**Total Site**	**Total[1]**
2-year	0.536	0.273	0.449	0.177	0.313	**1.748**	**1.612**
5-year	0.947	0.474	0.777	0.321	0.559	**3.078**	**2.861**
10-year	1.253	0.622	1.016	0.431	0.744	**4.066**	**3.805**
25-year	1.661	0.815	1.331	0.579	0.995	**5.381**	**5.113**
50-year	1.979	0.965	1.574	0.697	1.192	**6.407**	**6.186**
100-year	2.305	1.117	1.821	0.816	1.392	**7.451**	**7.304**
Regional	5.001	1.958	3.524	1.601	3.279	**15.363**	**16.387**

1. Total internal and external flows directed to the east tributary.

Internal Pre-Development Peak Runoff Directed to the East Tributary (12-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)						
	102	**103**	**104**	**105**	**106**	**Total Site**	**Total[1]**
2-year	0.562	0.280	0.466	0.183	0.329	**1.820**	**1.729**
5-year	0.926	0.455	0.754	0.308	0.548	**2.991**	**2.850**
10-year	1.193	0.580	0.961	0.401	0.710	**3.845**	**3.687**
25-year	1.544	0.741	1.230	0.525	0.926	**4.966**	**4.811**
50-year	1.814	0.865	1.435	0.620	1.093	**5.827**	**5.717**
100-year	2.091	0.990	1.642	0.718	1.265	**6.706**	**6.655**

1. Total internal and external flows directed to the east tributary.

Pre-Development Peak Runoff Directed to Airport Road & Neighbouring Property (6-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)				
	107	**108**	**EXT7**	**Total to Airport Road**	**109[1]**
2-year	0.045	0.205	0.081	**0.267**	**0.081**
5-year	0.081	0.358	0.118	**0.459**	**0.145**
10-year	0.106	0.470	0.145	**0.597**	**0.193**
25-year	0.139	0.617	0.179	**0.778**	**0.256**
50-year	0.164	0.730	0.205	**0.920**	**0.307**
100-year	0.190	0.844	0.238	**1.058**	**0.358**
Regional	0.240	1.387	0.204	**1.750**	**0.614**

1. Runoff directed towards the neighboring property.

Pre-Development Peak Runoff Directed to Airport Road & Neighbouring Property (12-Hour)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)				
	107	**108**	**EXT7**	**Total to Airport Road**	**109[1]**
2-year	0.044	0.210	0.054	**0.274**	**0.084**
5-year	0.069	0.341	0.075	**0.439**	**0.138**
10-year	0.086	0.434	0.091	**0.555**	**0.178**
25-year	0.109	0.555	0.110	**0.707**	**0.23**
50-year	0.126	0.645	0.124	**0.822**	**0.269**
100-year	0.143	0.737	0.138	**0.939**	**0.309**

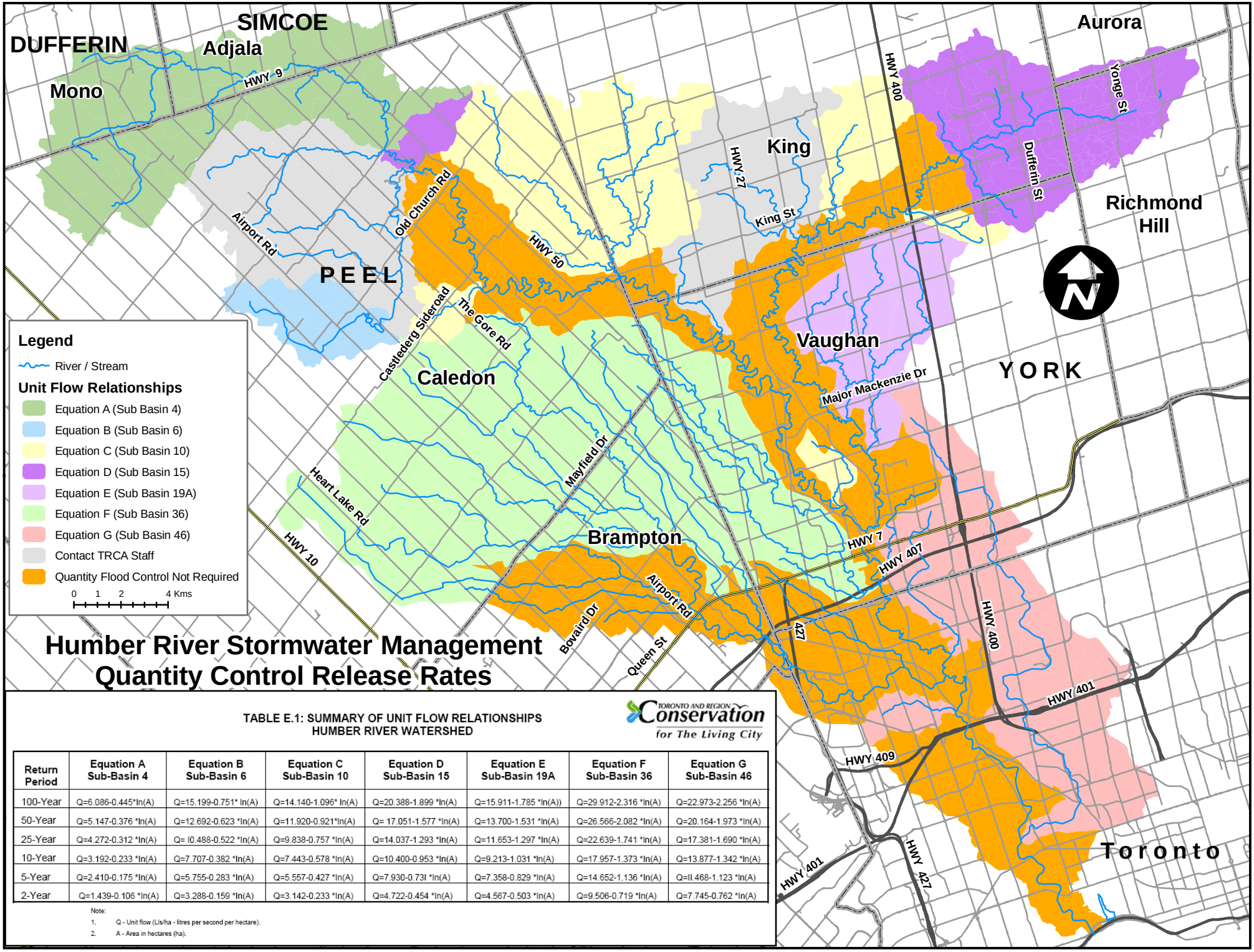
1. Runoff directed towards the neighboring property.

Internal Pre-Development Peak Runoff Directed to the Salt Creek (6-Hour Storm)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)		
	110	**111**	**Total**
2-year	0.206	0.003	**0.209**
5-year	0.363	0.005	**0.367**
10-year	0.478	0.006	**0.484**
25-year	0.630	0.008	**0.637**
50-year	0.747	0.010	**0.755**
100-year	0.864	0.012	**0.873**
Regional	1.274	0.014	**1.287**

Internal Pre-Development Peak Runoff Directed to Salt Creek (12-Hour Storm)

Design Storm Event	Pre-Development Uncontrolled Flow Rate (m^3/s)		
	110	**111**	**Total**
2-year	0.210	0.003	**0.213**
5-year	0.339	0.004	**0.343**
10-year	0.430	0.005	**0.435**
25-year	0.546	0.007	**0.552**
50-year	0.634	0.008	**0.641**
100-year	0.722	0.009	**0.730**



Humber River Stormwater Management Quantity Control Release Rates

TABLE E.1: SUMMARY OF UNIT FLOW RELATIONSHIPS
HUMBER RIVER WATERSHED

Return Period	Equation A Sub-Basin 4	Equation B Sub-Basin 6	Equation C Sub-Basin 10	Equation D Sub-Basin 15	Equation E Sub-Basin 19A	Equation F Sub-Basin 36	Equation G Sub-Basin 46
100-Year	Q=6.086-0.445*ln(A)	Q=15.199-0.751* ln(A)	Q=14.140-1.096* ln(A)	Q=20.388-1.899 *ln(A)	Q=15.911-1.785 *ln(A))	Q=29.912-2.316 *ln(A)	Q=22.973-2.256 *ln(A)
50-Year	Q=5.147-0.376 *ln(A)	Q=12.692-0.623 *ln(A)	Q=11.920-0.921*ln(A)	Q= 17.051-1.577 *ln(A)	Q=13.700-1.531 *ln(A)	Q=26.566-2.082 *ln(A)	Q=20.164-1.973 *ln(A)
25-Year	Q=4.272-0.312 *ln(A)	Q= l0.488-0.522 *ln(A)	Q=9.838-0.757 *ln(A)	Q=14.037-1.293 *ln(A)	Q=11.653-1.297 *ln(A)	Q=22.639-1.741 *ln(A)	Q=17.381-1.690 *ln(A)
10-Year	Q=3.192-0.233 *ln(A)	Q=7.707-0.382 *ln(A)	Q=7.443-0.578 *ln(A)	Q=10.400-0.953 *ln(A)	Q=9.213-1.031 *ln(A)	Q=17.957-1.373 *ln(A)	Q=13.877-1.342 *ln(A)
5-Year	Q=2.410-0.175 *ln(A)	Q=5.755-0.283 *ln(A)	Q=5.557-0.427 *ln(A)	Q=7.930-0.73l *ln(A)	Q=7.358-0.829 *ln(A)	Q=14.652-1.136 *ln(A)	Q=ll.468-1.123 *ln(A)
2-Year	Q=1.439-0.106 *ln(A)	Q=3.288-0.159 *ln(A)	Q=3.142-0.233 *ln(A)	Q=4.722-0.454 *ln(A)	Q=4.567-0.503 *ln(A)	Q=9.506-0.719 *ln(A)	Q=7.745-0.762 *ln(A)

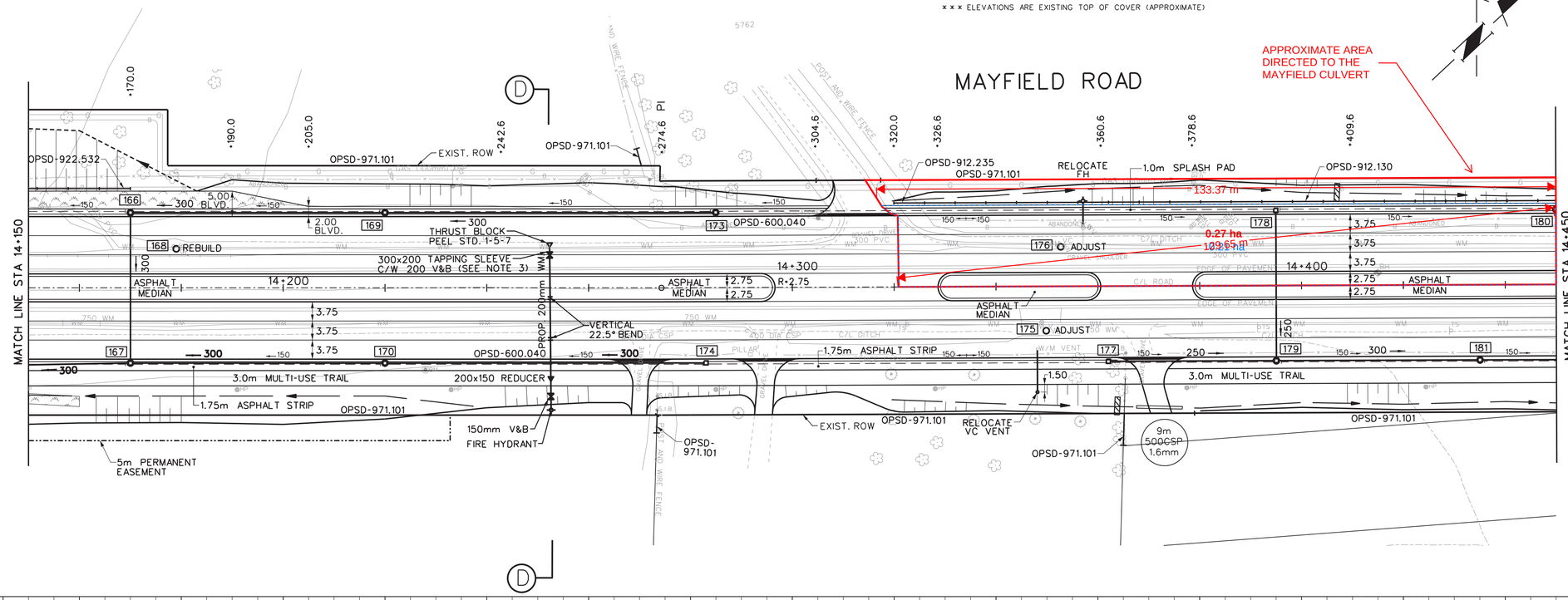
Note:
1. Q - Unit flow (Lls/ha - litres per second per hectare).
2. A - Area in hectares (ha).

TORONTO AND REGION Conservation for The Living City

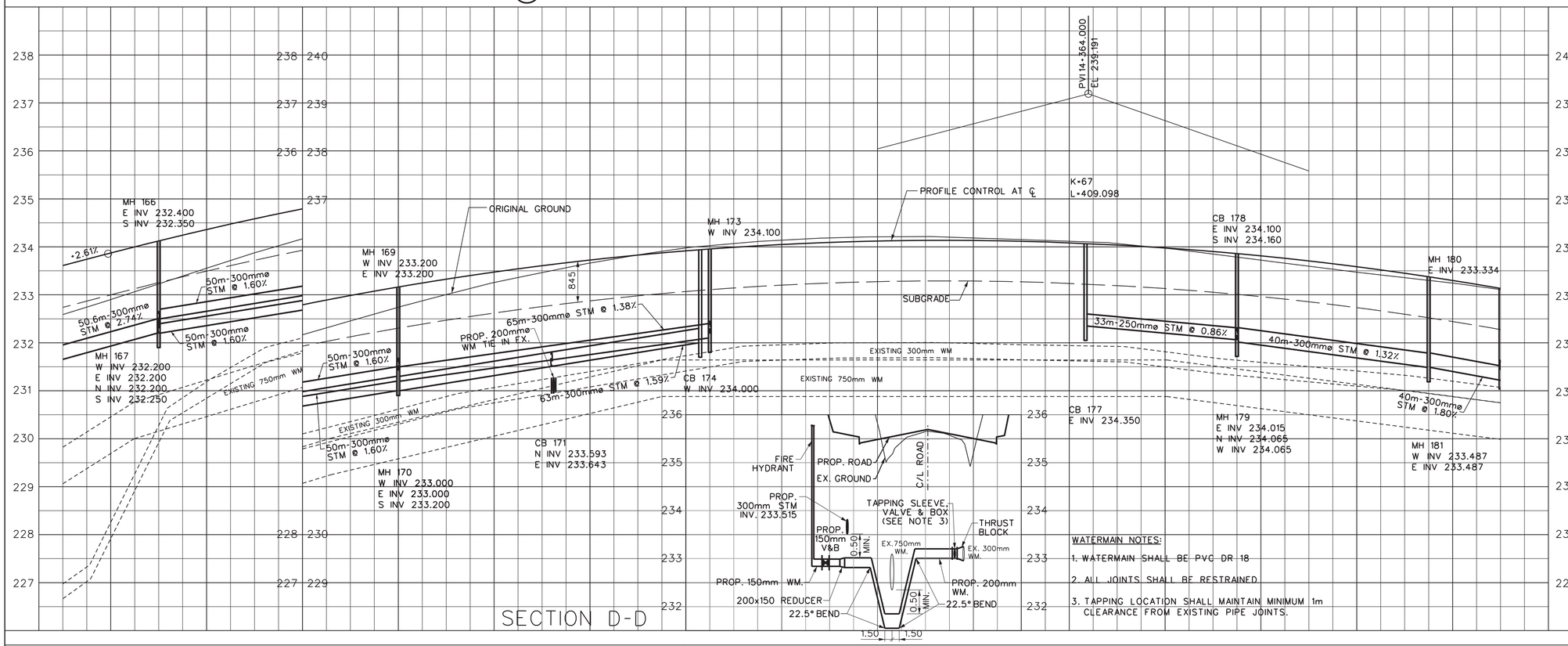
No.	Station	Offset to structure		Structure (OPSD)	Cover x x x (OPSD)	T/cover	Low Invert Elevation
166	14+170.0	14.76	LT	701.010	400.082	233.970	232.350
167	14+170.0	14.76	RT	701.010	400.082	233.830	232.200
168	14+179.0	7.67	LT	EXISTING	EXISTING(233.081)	234.186	EXISTING
169	14+220.0	14.76	LT	701.010	400.082	235.008	233.200
170	14+220.0	14.76	RT	701.010	400.082	234.868	233.200
173	14+285.0	14.76	LT	701.010	400.082	235.800	234.100
174	14+283.0	14.76	RT	705.010	400.082	235.785	234.000

No.	Station	Offset to structure		Structure (OPSD)	Cover x x x (OPSD)	T/cover	Low Invert Elevation
175	14+349.8	8.71	RT	EXISTING	EXISTING(235.875)	235.943	EXISTING
176	14+352.7	7.77	LT	EXISTING	EXISTING(235.830)	235.953	EXISTING
177	14+362.0	14.76	RT	705.010	400.082	235.803	234.350
178	14+395.0	11.01	LT	705.010	400.082	235.704	234.200
179	14+395.0	14.76	RT	701.010	400.082	235.704	234.015
180	14+450.0	14.76	LT	701.010	401.082	234.979	233.334
181	14+435.0	14.76	RT	701.010	400.082	235.221	233.487

x x x ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)



KEY PLAN
N.T.S.



233.872	234.362	234.793	235.163	235.474	235.725	235.917	236.048	236.121	236.133	236.086	235.979	235.812	235.585	235.299	℄ PROP EL.
232.901	233.554	234.167	234.741	235.257	235.662	235.978	236.139	236.209	236.185	236.117	235.970	235.723	235.472	235.245	℄ EXIST EL.
14+160	14+180	14+200	14+220	14+240	14+260	14+280	14+300	14+320	14+340	14+360	14+380	14+400	14+420	14+440	CHAINAGE

SERVICE DATA

SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS	AUG 2014	S.Y
STORM SEWERS	NOV 2012	S.Y	BELL U/G CABLE	JAN 2017	S.Y
WATERMAINS	FEB 2010	S.Y	HYDRO U/G CABLE	OCT 2015	S.Y
TRANSIT			HYDRO ONE	OCT 2015	S.Y
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		

REVISIONS

DATE	DETAILS	INIT.
MAR 28, 2017	ISSUE FOR TENDER	J.K
APR 21, 2017	ADDENDUM 2	A.C
MAY 18, 2017	ISSUE FOR CONSTRUCTION	J.K
AUG 09, 2018	REVISION 1	A.C.
NOV 02, 2018	REVISION 2	A.C.

General Notes

- All Driveways ASPHALT Unless Otherwise Noted.
- All Service Locations Are Approximate And Must Be Located Accurately In The Field
- Denotes Building - Not Located
- Denotes Building Located Type 'B' Bedding Unless Otherwise Noted (SAN)

B.M. No. Elev.

The Contractor Is Responsible For Locating And Protecting All Existing Utilities Prior To And During Construction Location of Existing Utilities Approximate Only, To Be Verified In Field By Contractor.

IBI Group
100 - 175 Galaxy Blvd.
Toronto ON M9W 0C9 CANADA

REGISTERED PROFESSIONAL ENGINEER J.KREUTZER MAR28,2017 PROVINCE OF ONTARIO
Designed by
Chkd.

LICENSED PROFESSIONAL ENGINEER R.G.PANDEY 100106174 MAR28,2017 PROVINCE OF ONTARIO
Designed by

NOTICE TO CONTRACTOR

48 HOURS PRIOR TO COMMENCING WORK NOTIFY THE FOLLOWING

THE REGIONAL MUNICIPALITY OF PEEL
CITY OF MISSISSAUGA WORKS DEPT.
CITY OF BRAMPTON WORKS DEPT.
TOWN OF CALEDON WORKS DEPT.
BELL CANADA
ENBRIDGE INCORPORATED-GAS DISTRIBUTION
ONTARIO MINISTRY OF TRANSPORTATION
ONTARIO CLEAN WATER AGENCY
HYDRO ONE NETWORKS
ENERSOURCE, HYDRO MISSISSAUGA
HYDRO ONE BRAMPTON

CABLE TELEVISION/FIBREOPTIC PROVIDERS:
BELL CANADA
ENERSOURCE TELECOM
HYDRO ONE TELECOM
ROGERS CABLE
ALLSTREAM
PSN (PUBLIC SECTOR NETWORK)
FUTUREWAY (FCI BROADBAND)

10m 0 10 20 30m — 30.00 m — HORIZONTAL SCALE
1m 0 1 2 3m — VERTICAL SCALE

Region of Peel
Working for you

MAYFIELD ROAD

(FROM EAST OF BRAMALEA ROAD TO WEST OF AIRPORT ROAD)

NEW CONSTRUCTION

STA. 14+150 TO STA. 14+450

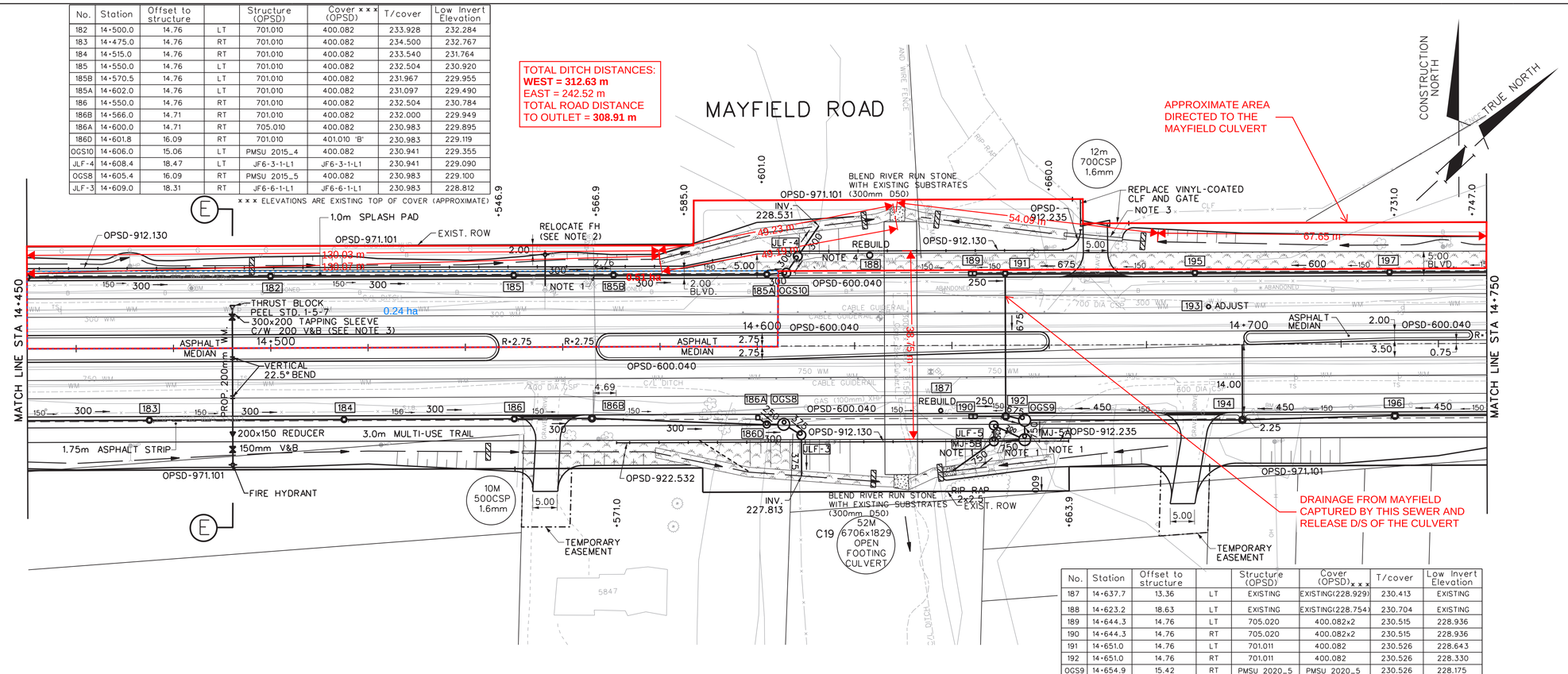
CAD Area		Area	B-29 / C-05
Checked by	J.K	Drawn by	S.Y
Date	FEB 6, 2017	Sheet	18 of 80

Project No. 06-4040
Plan No. 62272-D

No.	Station	Offset to structure		Structure (OPSD)	Cover x x x (OPSD)	T/cover	Low Invert Elevation
182	14+500.0	14.76	LT	701.010	400.082	233.928	232.284
183	14+475.0	14.76	RT	701.010	400.082	234.500	232.767
184	14+515.0	14.76	RT	701.010	400.082	233.540	231.764
185	14+550.0	14.76	LT	701.010	400.082	232.504	230.920
185B	14+570.5	14.76	LT	701.010	400.082	231.967	229.955
185A	14+602.0	14.76	LT	701.010	400.082	231.097	229.490
186	14+550.0	14.76	RT	701.010	400.082	232.504	230.784
186B	14+566.0	14.71	RT	701.010	400.082	232.000	229.949
186A	14+600.0	14.71	RT	705.010	400.082	230.983	229.895
186D	14+601.8	16.09	RT	701.010	401.010 'B'	230.983	229.119
OGS10	14+606.0	15.06	LT	PMSU 2015_4	400.082	230.941	229.355
JLF-4	14+608.4	18.47	LT	JF6-3-1-L1	JF6-3-1-L1	230.941	229.090
OGS8	14+605.4	16.09	RT	PMSU 2015_5	400.082	230.983	229.100
JLF-3	14+609.0	18.31	RT	JF6-6-1-L1	JF6-6-1-L1	230.983	228.812

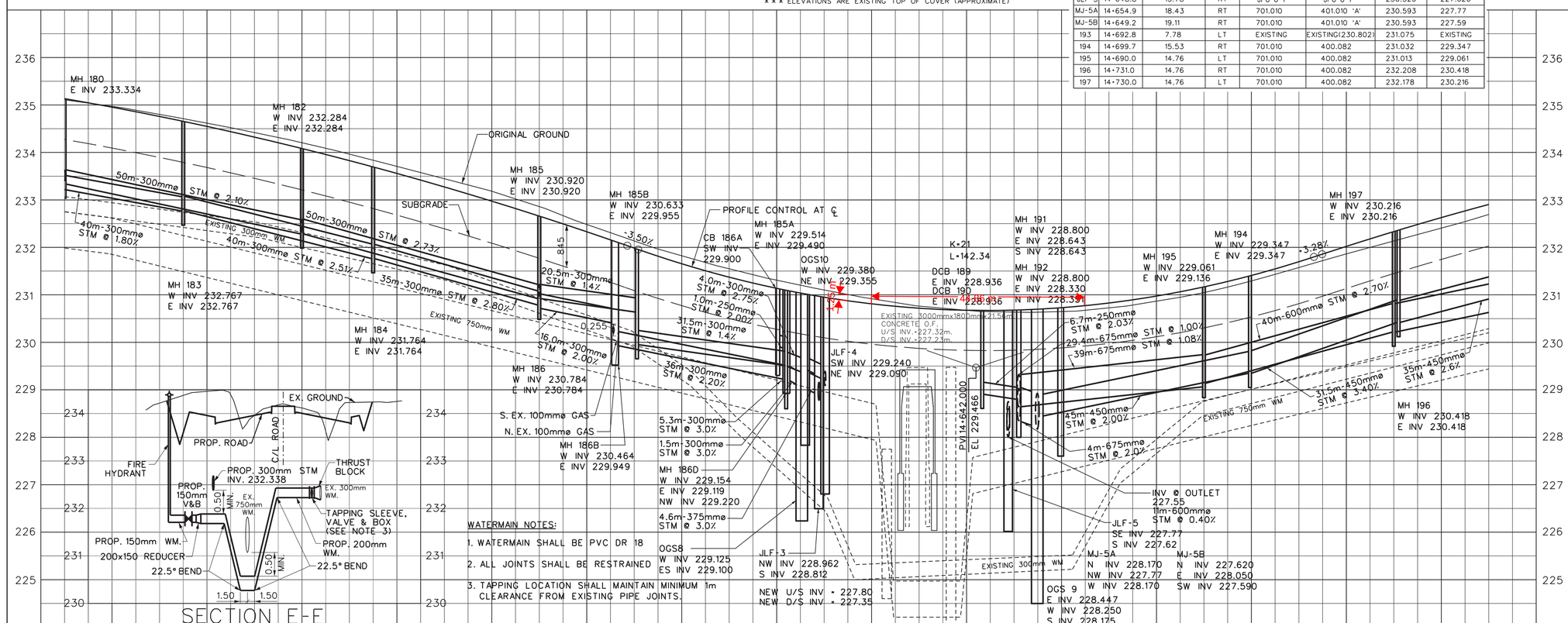
x x x ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)

TOTAL DITCH DISTANCES:
WEST = 312.63 m
EAST = 242.52 m
TOTAL ROAD DISTANCE
TO OUTLET = **308.91 m**



x x x ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)

No.	Station	Offset to structure		Structure (OPSD)	Cover (OPSD) x x x	T/cover	Low Invert Elevation
187	14+637.7	13.36	LT	EXISTING	EXISTING(228.929)	230.413	EXISTING
188	14+623.2	18.63	LT	EXISTING	EXISTING(228.754)	230.704	EXISTING
189	14+644.3	14.76	LT	705.020	400.082x2	230.515	228.936
190	14+644.3	14.76	RT	705.020	400.082x2	230.515	228.936
191	14+651.0	14.76	LT	701.011	400.082	230.526	228.643
192	14+651.0	14.76	RT	701.011	400.082	230.526	228.330
OGS9	14+654.9	15.42	RT	PMSU 2020_5	PMSU 2020_5	230.526	228.175
JLF-5	14+648.8	15.78	RT	JF6-6-1	JF6-6-1	230.526	227.620
MJ-5A	14+654.9	18.43	RT	701.010	401.010 'A'	230.593	227.77
MJ-5B	14+649.2	19.11	RT	701.010	401.010 'A'	230.593	227.59
193	14+692.8	7.78	LT	EXISTING	EXISTING(230.802)	231.075	EXISTING
194	14+699.7	15.53	RT	701.010	400.082	231.032	229.347
195	14+690.0	14.76	LT	701.010	400.082	231.013	229.061
196	14+731.0	14.76	RT	701.010	400.082	232.208	230.418
197	14+730.0	14.76	LT	701.010	400.082	232.178	230.216



WATERMAIN NOTES:

1. WATERMAIN SHALL BE PVC DR 18
2. ALL JOINTS SHALL BE RESTRAINED
3. TAPPING LOCATION SHALL MAINTAIN MINIMUM 1m CLEARANCE FROM EXISTING PIPE JOINTS.

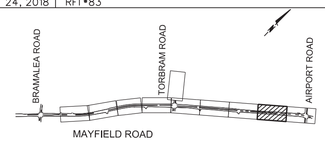
234.954	234.548	234.083	233.558	232.973	232.329	231.655	231.138	230.811	230.675	230.729	230.974	231.409	232.021	232.627	℄ PROP EL.
234.970	234.616	234.204	233.706	233.182	232.482	231.823	231.309	230.918	230.674	230.649	230.868	231.293	231.861	232.406	℄ EXIST EL.
14+460	14+480	14+500	14+520	14+540	14+560	14+580	14+600	14+620	14+640	14+660	14+680	14+700	14+720	14+740	CHAINAGE

SERVICE DATA

SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		

REVISIONS

DATE	DETAILS	INIT.
MAY 18, 2017	ISSUE FOR CONSTRUCTION	J.K
JUN 22, 2017	REVISION 1	J.K
AUG 31, 2017	REVISION 2	R.P.
JUNE 19, 2018	REVISION 3	R.P.
AUG 30, 2018	REVISION 4	A.C.
SEP 24, 2018	RFI #83	A.C.



KEY PLAN
N.T.S.

NOTES:

1. FIRE HYDRANT LEAD TO BE BELOW NEW STORM SEWER. CONFIRM LOCATION AND ELEVATION OF EXISTING BELL CONDUIT PRIOR TO RELOCATING FIRE HYDRANT AND ADVISE ENGINEER OF CONFLICT, IF ANY.
2. CONFIRM EXISTING BELL LINE LOCATION AND ELEVATION PRIOR TO INSTALLING CULVERT, AND ADVISE ENGINEER OF CONFLICT, IF ANY.

General Notes

- All Driveways ASPHALT Unless Otherwise Noted.
- All Service Locations Are Approximate And Must Be Located Accurately In The Field
- Denotes Building - Not Located
- Denotes Building Located Type 'B' Bedding Unless Otherwise Noted (SAN)

B.M. No. Elev.

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IBI Group
100 - 175 Galaxy Blvd.
Toronto ON M9W 0C9 CANADA

REGISTERED PROFESSIONAL ENGINEER J.KREUTZER MAR28,2017 PROVINCE OF ONTARIO — Designed by — Chkd.

LICENSED PROFESSIONAL ENGINEER R.G.PANDEY 100106174 MAR28,2017 PROVINCE OF ONTARIO — Designed by

NOTICE TO CONTRACTOR

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THE REGIONAL MUNICIPALITY OF PEEL
CITY OF MISSISSAUGA WORKS DEPT.
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PSN (PUBLIC SECTOR NETWORK)
FUTUREWAY (FCI BROADBAND)

10m 0 10 20 30m — HORIZONTAL SCALE
1m 0 1 2 3m — VERTICAL SCALE

Region of Peel
Working for you

MAYFIELD ROAD

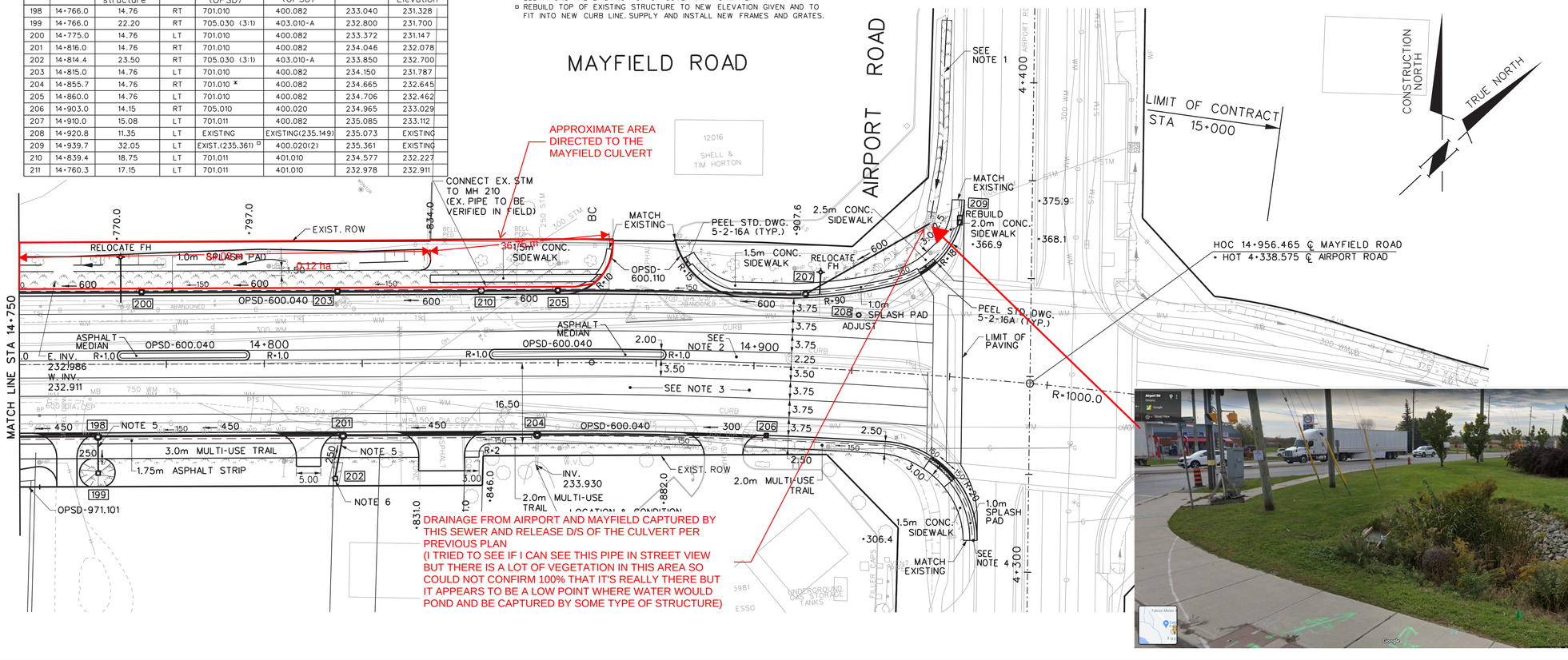
(FROM EAST OF BRAMALEA ROAD TO WEST OF AIRPORT ROAD)
NEW CONSTRUCTION

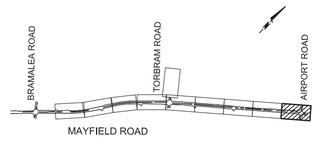
STA. 14+450 TO STA. 14+750

CAD Area	Area	B-29 / C-05	Project No. 06-4040
Checked by J.K	Drawn by	S.Y	
Date FEB 6, 2017	Sheet	19 of 80	Plan No. 62273-D

No.	Station	Offset to structure		Structure (OPSD)	Cover ×××(OPSD)	T/cover	Low Invert Elevation
198	14+766.0	14.76	RT	701.010	400.082	233.040	231.328
199	14+766.0	22.20	RT	705.030 (3:1)	403.010-A	232.800	231.700
200	14+775.0	14.76	LT	701.010	400.082	233.372	231.147
201	14+816.0	14.76	RT	701.010	400.082	234.046	232.078
202	14+814.4	23.50	RT	705.030 (3:1)	403.010-A	233.850	232.700
203	14+815.0	14.76	LT	701.010	400.082	234.150	231.787
204	14+855.7	14.76	RT	701.010 ×	400.082	234.665	232.645
205	14+860.0	14.76	LT	701.010	400.082	234.706	232.462
206	14+903.0	14.15	RT	705.010	400.020	234.965	233.029
207	14+910.0	15.08	LT	701.011	400.082	235.085	233.112
208	14+920.8	11.35	LT	EXISTING	EXISTING(235.149)	235.073	EXISTING
209	14+939.7	32.05	LT	EXIST.(235.361) □	400.020(2)	235.361	EXISTING
210	14+839.4	18.75	LT	701.011	401.010	234.577	232.227
211	14+760.3	17.15	LT	701.011	401.010	232.978	232.911

× CONNECT EXISTING CSP FROM SOUTH SIDE TO NEW MH
××× ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)
□ REBUILD TOP OF EXISTING STRUCTURE TO NEW ELEVATION GIVEN AND TO FIT INTO NEW CURB LINE. SUPPLY AND INSTALL NEW FRAMES AND GRATES.





KEY PLAN
N.T.S.

SERVICE DATA

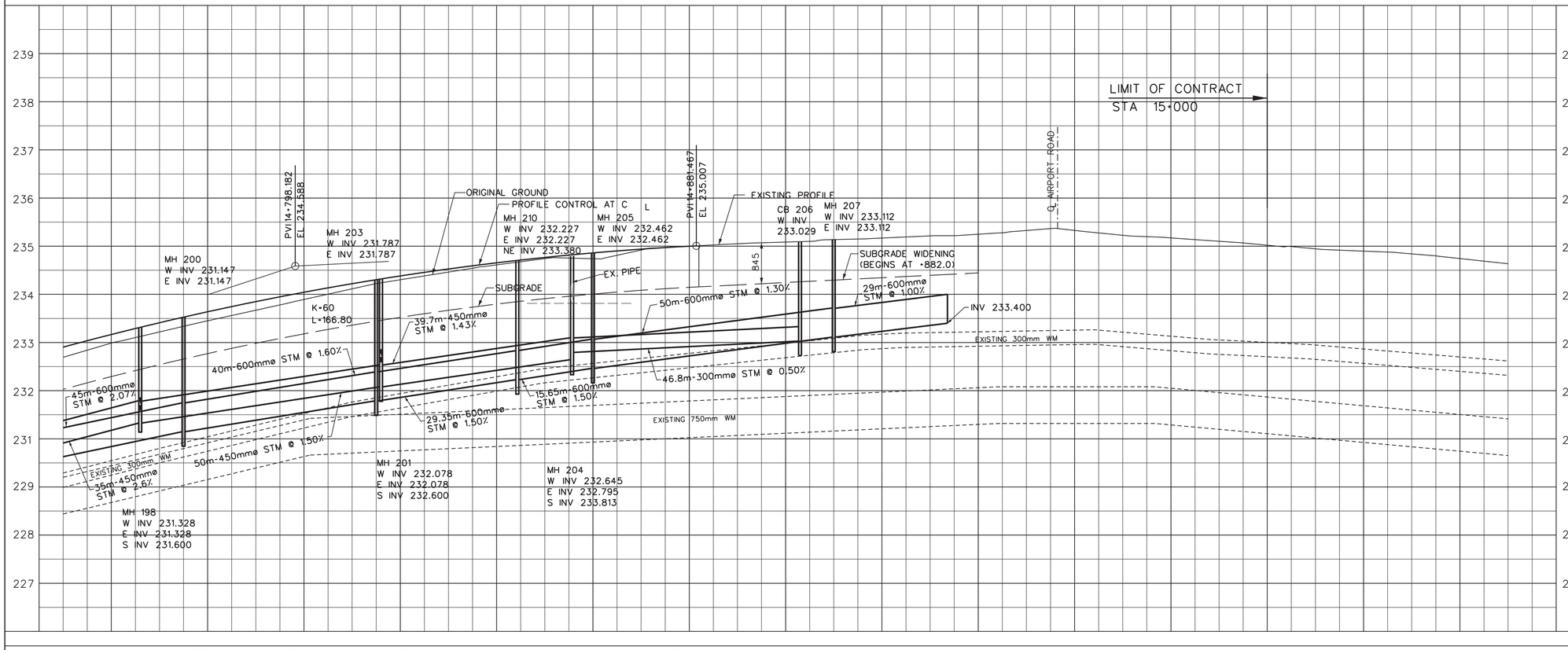
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS	AUG 2014	S.Y
STORM SEWERS	NOV 2012	S.Y	BELL U/G CABLE	JAN 2017	S.Y
WATERMAINS	FEB 2010	S.Y	HYDRO U/G CABLE	OCT 2015	S.Y
TRANSIT			HYDRO ONE	OCT 2015	S.Y
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		

REVISIONS

DATE	DETAILS	INIT.
MAR 28, 2017	ISSUE FOR TENDER	J.K
MAY 18, 2017	ISSUE FOR CONSTRUCTION	J.K

NOTES:

1. CLEAN OUT DITCH TO A MINIMUM DEPTH OF 150mm FOR 1m WIDTH EACH SIDE OF EXISTING DITCH CENTRE AND REGRADE OVER THE LENGTH INDICATED TO PROVIDE A UNIFORM SLOPE TO NEW STORM SEWER INLET. TOPSOIL AND SOD 1m ON EACH SIDE OF REGRADED DITCH CENTRE. REMOVE, SALVAGE AND REPLACE RIP-RAP AT NEW 600mm STORM SEWER INLET. MAINTAIN EXISTING STORM OUTFALLS IN RIP-
EA.
14+882.0 TO 14+907.6 MAYFIELD ROAD
DENS FROM 5.5m(2x2.75m) TO 5.75m
TO MATCH EXISTING MEDIAN.
OADWAY TO BE FULLY EXCAVATED AND
EST OF STA. 14+882.0. EXISTING ROADWAY
NTAINED EAST OF STA. 14+882.0 EXCEPT
NG EXISTING SURFACE 50mm AND
NG WITH 50mm HL-1 UP TO LIMIT OF
STING SUBDRAINS UNDER EXISTING
EDGE ALONG WITH THEIR OUTLETS TO BE
BETWEEN 14+830 AND LIMIT OF PAVING AND
WITH GRANULAR 'B' TYPE II.
XISTING SUBDRAIN FLOWING SOUTH ON
OAD AND JOIN NEW SUBDRAIN TO IT.
XISTING GASMAIN LOCATION AND ELEVATION
INSTALLING STORM SEWER AND ADJACENT
S, AND ADVISE ENGINEER OF CONFLICT,
ISTING SUMP PUMP DRAINAGE PIPE,
G FROM 5955 MAYFIELD ROAD TO EXISTING
H AT 14+815±. INTERCEPT, CUT, AND
TO NEW DI NO. 211A. DISPOSE OF SURPLUS.



233.166	233.638	234.047	234.383	234.655	234.861	234.997											℄ PROP EL.
232.989	233.452	233.895	234.303	234.613	234.840	235.000	235.086	235.168	235.249	235.328							℄ EXIST EL.
14+760	14+780	14+800	14+820	14+840	14+860	14+880	14+900	14+920	14+940	14+960	14+980	15+000	15+020	15+040			CHAINAGE

IBI Group
100 - 175 Galaxy Blvd.
Toronto ON M9W 0C9 CANADA

REGISTERED PROFESSIONAL ENGINEER J.KREUTZER MAR28,2017 PROVINCE OF ONTARIO
Designed by ____ Chkd. ____

LICENSED PROFESSIONAL ENGINEER R.G.PANDEY 100106174 MAR28,2017 PROVINCE OF ONTARIO
Designed by ____

NOTICE TO CONTRACTOR

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ENERSOURCE TELECOM
HYDRO ONE TELECOM
ROGERS CABLE
ALLSTREAM
PSN (PUBLIC SECTOR NETWORK)
FUTUREWAY (FCI BROADBAND)

10m 0 10 20 30m — HORIZONTAL SCALE
1m 0 1 2 3m — VERTICAL SCALE

Region of Peel
Working for you

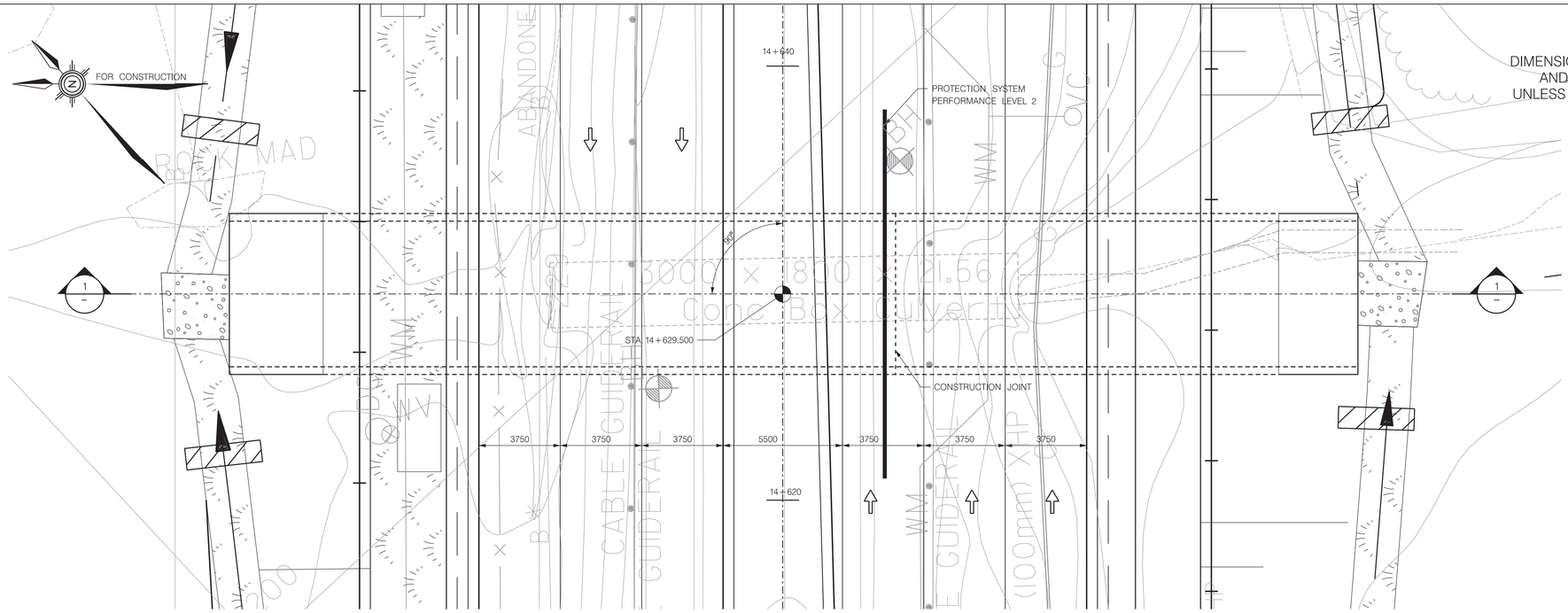
MAYFIELD ROAD

(FROM EAST OF BRAMALEA ROAD TO WEST OF AIRPORT ROAD)

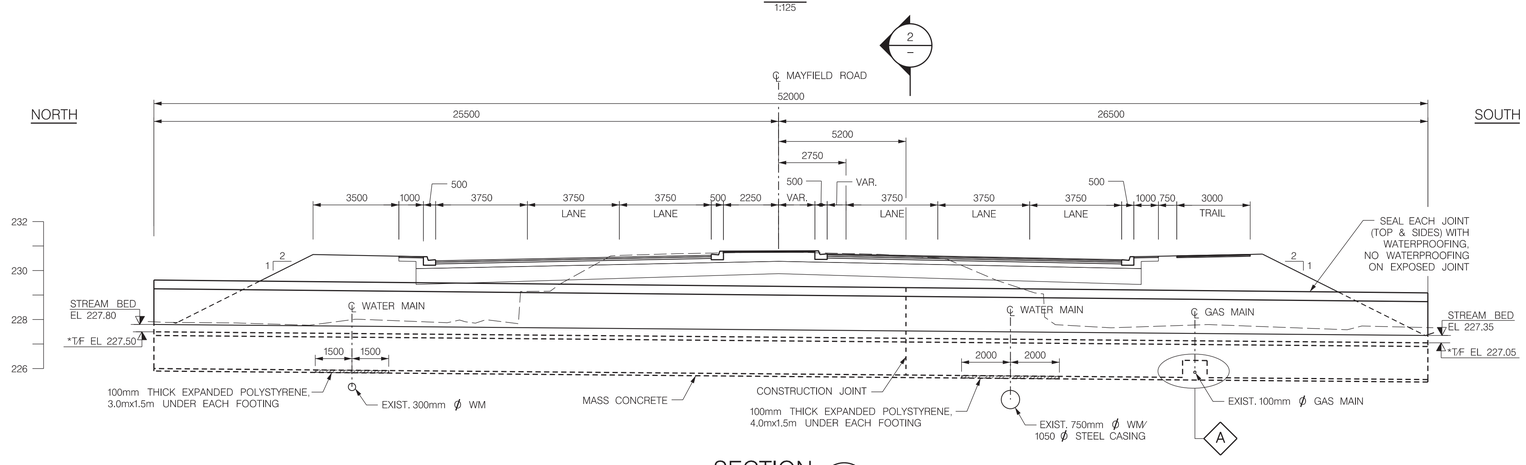
NEW CONSTRUCTION

STA. 14+750 TO STA. 15+000

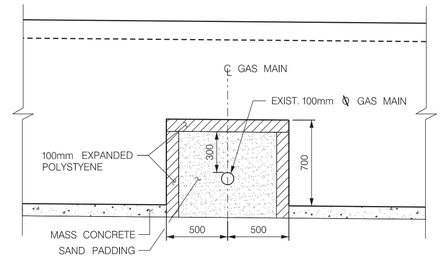
CAD Area	Area B-29 / C-05	Project No.	06-4040
Checked by J.K	Drawn by S.Y		
Date FEB 6, 2017	Sheet 20 of 80	Plan No.	62274-D

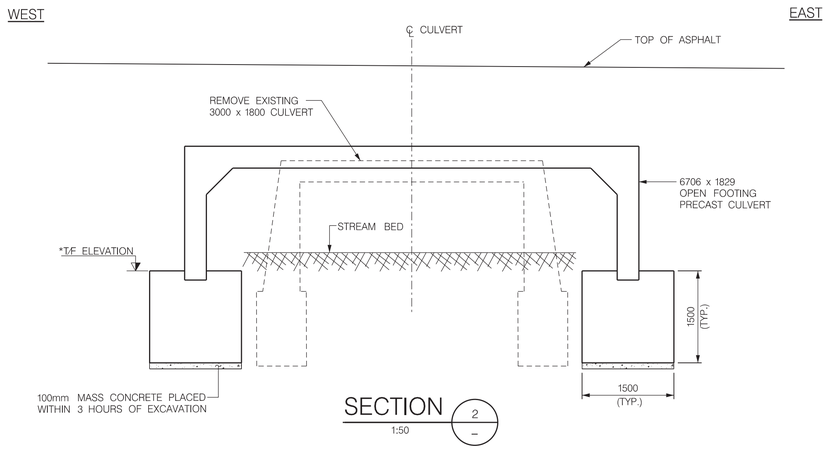


PLAN
1:125

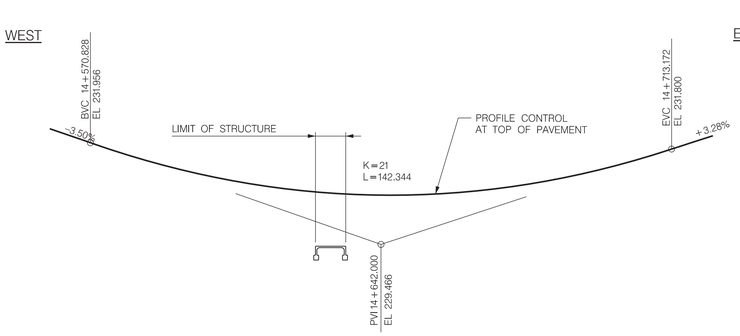


SECTION 1
1:125





SECTION 2
1:50



PROFILE OF MAYFIELD ROAD
N.T.S.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES
UNLESS OTHERWISE SHOWN

REVISIONS		
DATE	DETAILS	INIT.
MAR. 28, 2017	ISSUED FOR TENDER	D.M.
MAY 18, 2017	ISSUED FOR CONSTRUCTION	D.M.
JULY 7, 2017	REV 1: OPENING FOR GAS MAIN	D.M.
NOV 21, 2017	REV 2: OPENING FOR GAS MAIN	D.M.
MAR 21, 2018	REV 3: OPENING FOR GAS MAIN	D.M.
APR 19, 2018	REV 4: MNR REVISION	D.M.

GENERAL NOTES

DESIGN CODE : CHBDC CAN/CSA–S6–06
DESIGN LOAD : CL–625–ONT

CLASS OF CONCRETE

MASS CONCRETE 20MPa
PRECAST CONCRETE 35MPa
ALL CONCRETE (UNLESS OTHERWISE NOTED) 35MPa

CLEAR COVER TO REINFORCING STEEL

FOOTINGS ..... 100 ± 25mm
PRECAST CONCRETE..... 40 ± 10mm
REMAINDER (UNLESS OTHERWISE NOTED)..... 70 ± 20mm

REINFORCING STEEL

REINFORCING STEEL SHALL BE GRADE 400W UNLESS OTHERWISE SPECIFIED.

UNLESS SHOWN OTHERWISE, TENSION LAP SPLICES SHALL BE CLASS B.

BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWING SS12–1, UNLESS INDICATED OTHERWISE.

CONSTRUCTION NOTES

REMOVAL OF CULVERT AND ANY IN–WATER WORK IS PERMITED ONLY BETWEEN JULY 1 AND SEPTEMBER 15 UNLESS OTHERWISE GRANTED IN WRITING BY MNR.

BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH SIDES OF THE CULVERT KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN BACKFILL ELEVATION BE GREATER THAN 500mm.

FOR STAGING AND MAINTENANCE OF TRAFFIC, SEE CONSTRUCTION STAGING DRAWINGS.

APPLICABLE STANDARD DRAWINGS

OPSD – 803.010 BACKFILL AND COVER FOR CONCRETE CULVERTS

IBI Group
100-175 Galaxy Boulevard
Toronto ON M9W 0C9 Canada

LICENSED PROFESSIONAL ENGINEER
H. WANG
100147413
Mar. 21, 2018
PROVINCE OF ONTARIO
Designed by

LICENSED PROFESSIONAL ENGINEER
D.B. MOORE
Apr. 19, 2018
PROVINCE OF ONTARIO
Approved by

Region of Peel
Working for you

MAYFIELD ROAD

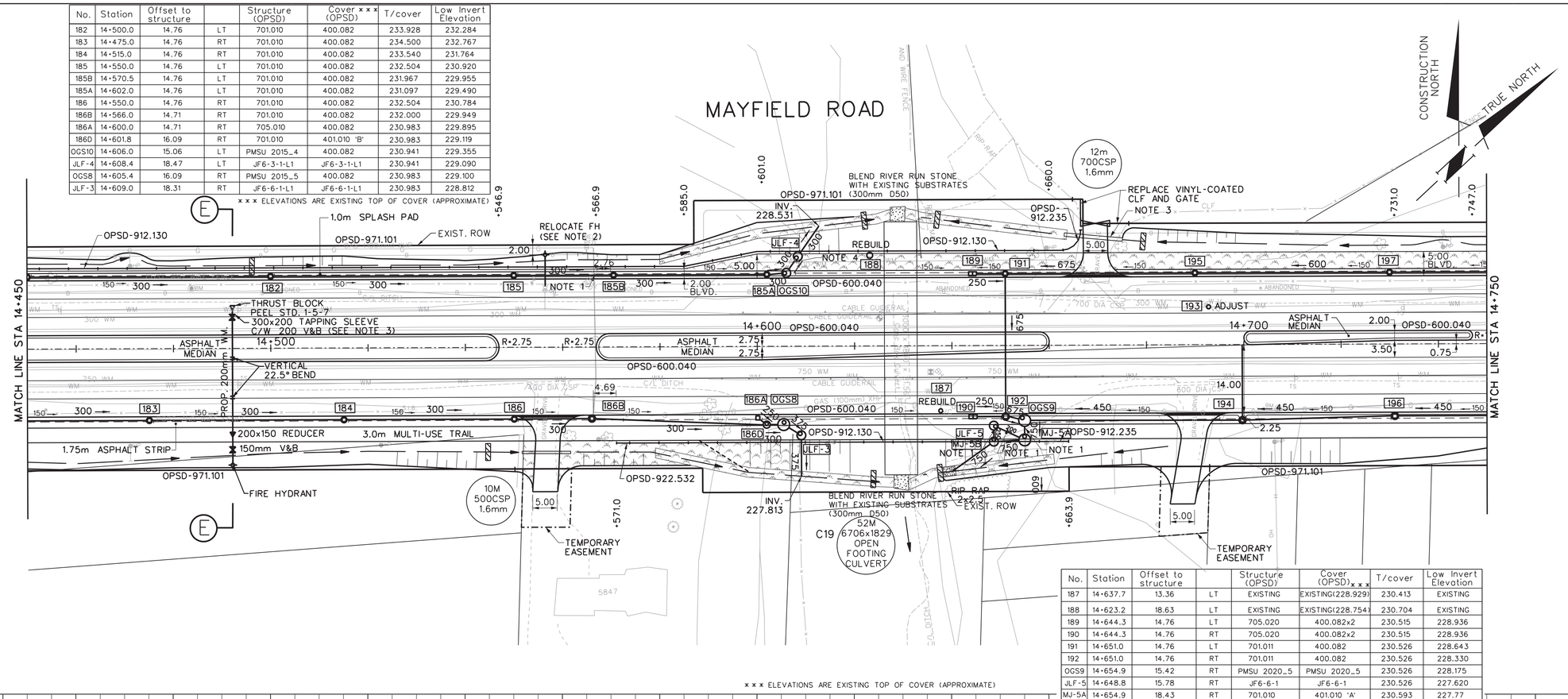
CULVERT AT 14 + 629.5
WEST OF AIRPORT ROAD (C–19)
GENERAL ARRANGEMENT

CAD Area	Area B-29 / C-05	Project No.	06-4040
Checked by D.B.M.	Drawn by A.M.S.		
Date FEB 6, 2017	Sheet 47 of 80	Plan No.	62301-D

DGN$SPEC*123456789012345678901234567890123456789012
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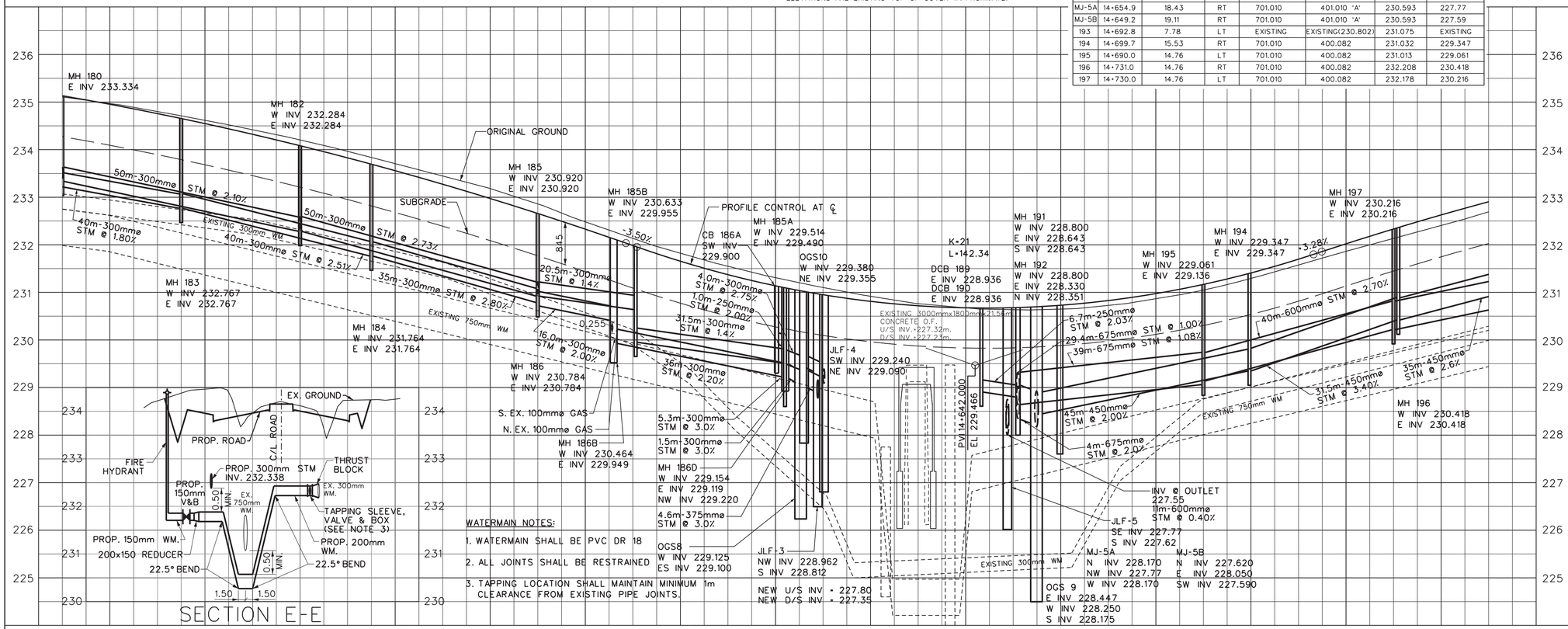
No.	Station	Offset to structure		Structure (OPSD)	Cover x x x (OPSD)	T/cover	Low Invert Elevation
182	14+500.0	14.76	LT	701.010	400.082	233.928	232.284
183	14+475.0	14.76	RT	701.010	400.082	234.500	232.767
184	14+515.0	14.76	RT	701.010	400.082	233.540	231.764
185	14+550.0	14.76	LT	701.010	400.082	232.504	230.920
185B	14+570.5	14.76	LT	701.010	400.082	231.967	229.955
185A	14+602.0	14.76	LT	701.010	400.082	231.097	229.490
186	14+550.0	14.76	RT	701.010	400.082	232.504	230.784
186B	14+566.0	14.71	RT	701.010	400.082	232.000	229.949
186A	14+600.0	14.71	RT	705.010	400.082	230.983	229.895
186D	14+601.8	16.09	RT	701.010	401.010 'B'	230.983	229.119
OGS10	14+606.0	15.06	LT	PMSU 2015_4	400.082	230.941	229.355
JLF-4	14+608.4	18.47	LT	JF6-3-1-L1	JF6-3-1-L1	230.941	229.090
OGS8	14+605.4	16.09	RT	PMSU 2015_5	400.082	230.983	229.100
JLF-3	14+609.0	18.31	RT	JF6-6-1-L1	JF6-6-1-L1	230.983	228.812

x x x ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)



No.	Station	Offset to structure		Structure (OPSD)	Cover (OPSD) x x x	T/cover	Low Invert Elevation
187	14+637.7	13.36	LT	EXISTING	EXISTING(228.929)	230.413	EXISTING
188	14+623.2	18.63	LT	EXISTING	EXISTING(228.754)	230.704	EXISTING
189	14+644.3	14.76	LT	705.020	400.082x2	230.515	228.936
190	14+644.3	14.76	RT	705.020	400.082x2	230.515	228.936
191	14+651.0	14.76	LT	701.011	400.082	230.526	228.643
192	14+651.0	14.76	RT	701.011	400.082	230.526	228.330
OGS9	14+654.9	15.42	RT	PMSU 2020_5	PMSU 2020_5	230.526	228.175
JLF-5	14+648.8	15.78	RT	JF6-6-1	JF6-6-1	230.526	227.620
MJ-5A	14+654.9	18.43	RT	701.010	401.010 'A'	230.593	227.77
MJ-5B	14+649.2	19.11	RT	701.010	401.010 'A'	230.593	227.59
193	14+692.8	7.78	LT	EXISTING	EXISTING(230.802)	231.075	EXISTING
194	14+699.7	15.53	RT	701.010	400.082	231.032	229.347
195	14+690.0	14.76	LT	701.010	400.082	231.013	229.061
196	14+731.0	14.76	RT	701.010	400.082	232.208	230.418
197	14+730.0	14.76	LT	701.010	400.082	232.178	230.216

x x x ELEVATIONS ARE EXISTING TOP OF COVER (APPROXIMATE)



WATERMAIN NOTES:

1. WATERMAIN SHALL BE PVC DR 18
2. ALL JOINTS SHALL BE RESTRAINED
3. TAPPING LOCATION SHALL MAINTAIN MINIMUM 1m CLEARANCE FROM EXISTING PIPE JOINTS.

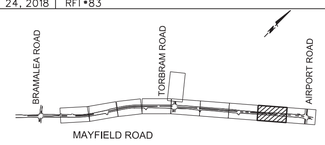
234.954	234.548	234.083	233.558	232.973	232.329	231.655	231.138	230.811	230.675	230.729	230.974	231.409	232.021	232.627	℄ PROP EL.
234.970	234.616	234.204	233.706	233.182	232.482	231.823	231.309	230.918	230.674	230.649	230.868	231.293	231.861	232.406	℄ EXIST EL.
14+460	14+480	14+500	14+520	14+540	14+560	14+580	14+600	14+620	14+640	14+660	14+680	14+700	14+720	14+740	CHAINAGE

SERVICE DATA

SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		

REVISIONS

DATE	DETAILS	INIT.
MAY 18, 2017	ISSUE FOR CONSTRUCTION	J.K
JUN 22, 2017	REVISION 1	J.K
AUG 31, 2017	REVISION 2	R.P.
JUNE 19, 2018	REVISION 3	R.P.
AUG 30, 2018	REVISION 4	A.C.
SEP 24, 2018	RFI•83	A.C.



KEY PLAN
N.T.S.

NOTES:

1. FIRE HYDRANT LEAD TO BE BELOW NEW STORM SEWER. CONFIRM LOCATION AND ELEVATION OF EXISTING BELL CONDUIT PRIOR TO RELOCATING FIRE HYDRANT AND ADVISE ENGINEER OF CONFLICT, IF ANY.
2. CONFIRM EXISTING BELL LINE LOCATION AND ELEVATION PRIOR TO INSTALLING CULVERT, AND ADVISE ENGINEER OF CONFLICT, IF ANY.

General Notes

- All Driveways ASPHALT Unless Otherwise Noted.
- All Service Locations Are Approximate And Must Be Located Accurately In The Field
- Denotes Building - Not Located
- Denotes Building Located Type 'B' Bedding Unless Otherwise Noted (SAN)

B.M. No. Elev.

The Contractor Is Responsible For Locating And Protecting All Existing Utilities Prior To And During Construction Location of Existing Utilities Approximate Only, To Be Verified In Field By Contractor.

IBI Group
100 - 175 Galaxy Blvd.
Toronto ON M9W 0C9 CANADA

REGISTERED PROFESSIONAL ENGINEER J.KREUTZER MAR28,2017 PROVINCE OF ONTARIO — Designed by — Chkd.

LICENCED PROFESSIONAL ENGINEER R.G.PANDEY 100106174 MAR28,2017 PROVINCE OF ONTARIO — Designed by

NOTICE TO CONTRACTOR

48 HOURS PRIOR TO COMMENCING WORK NOTIFY THE FOLLOWING

THE REGIONAL MUNICIPALITY OF PEEL	CABLE TELEVISION/FIBREOPTIC PROVIDERS:
CITY OF MISSISSAUGA WORKS DEPT.	BELL CANADA
CITY OF BRAMPTON WORKS DEPT.	ENERSOURCE TELECOM
TOWN OF CALEDON WORKS DEPT.	HYDRO ONE TELECOM
BELL CANADA	ROGERS CABLE
ENBRIDGE INCORPORATED-GAS DISTRIBUTION	ALLSTREAM
ONTARIO MINISTRY OF TRANSPORTATION	PSN (PUBLIC SECTOR NETWORK)
ONTARIO CLEAN WATER AGENCY	FUTUREWAY (FCI BROADBAND)
HYDRO ONE NETWORKS	
ENERSOURCE HYDRO MISSISSAUGA	
HYDRO ONE BRAMPTON	

10m 0 10 20 30m — HORIZONTAL SCALE

1m 0 1 2 3m — VERTICAL SCALE

Region of Peel
Working for you

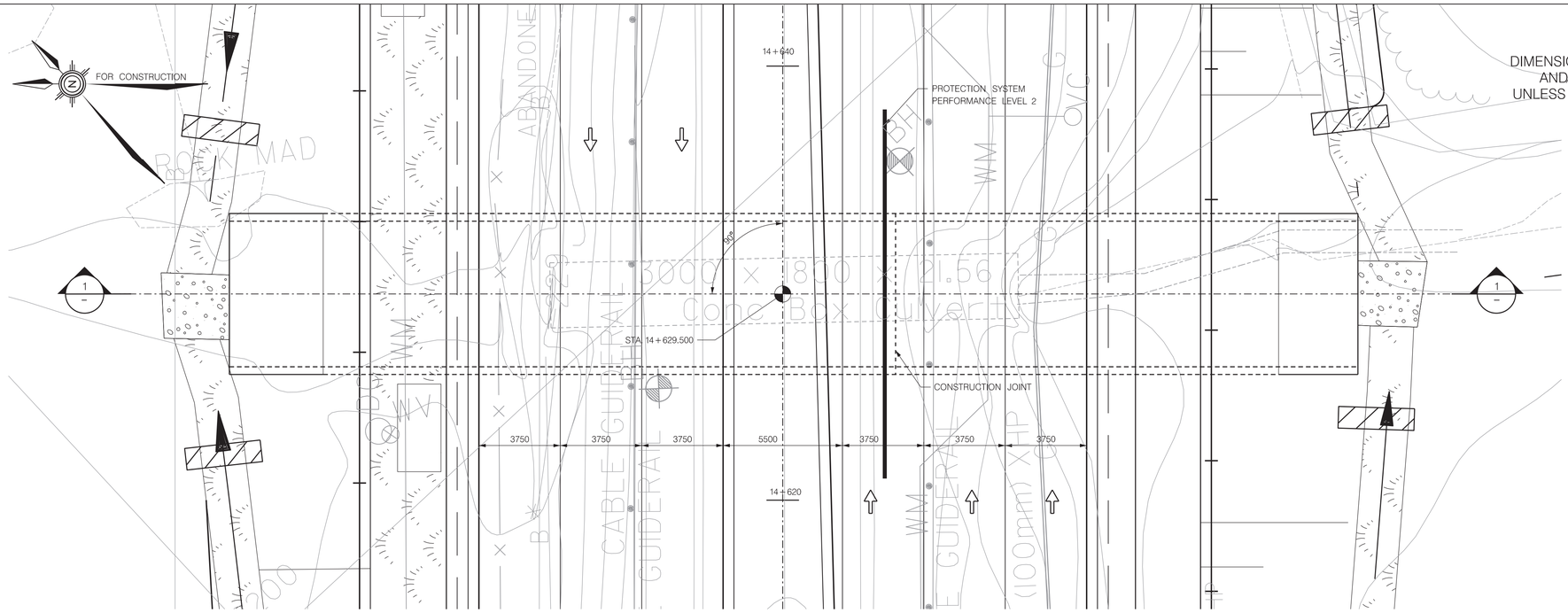
MAYFIELD ROAD

(FROM EAST OF BRAMALEA ROAD TO WEST OF AIRPORT ROAD)

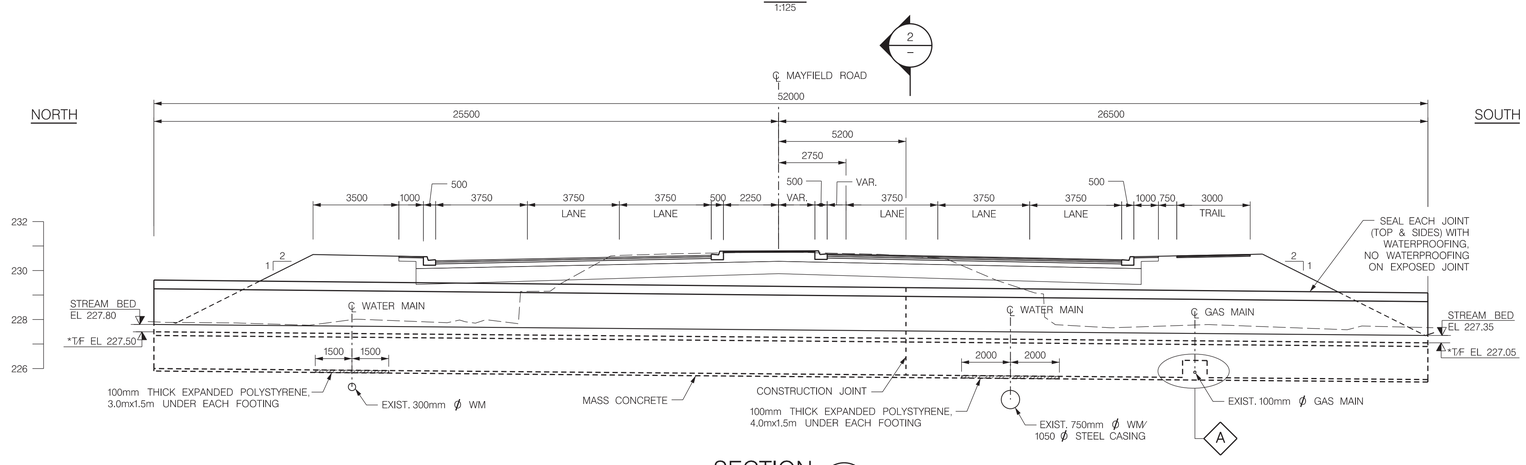
NEW CONSTRUCTION

STA. 14+450 TO STA. 14+750

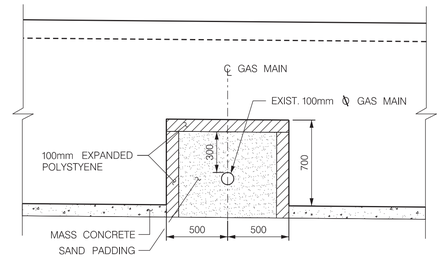
CAD Area	Area B-29 / C-05	Project No.	06-4040
Checked by J.K	Drawn by S.Y		
Date FEB 6, 2017	Sheet 19 of 80	Plan No.	62273-D

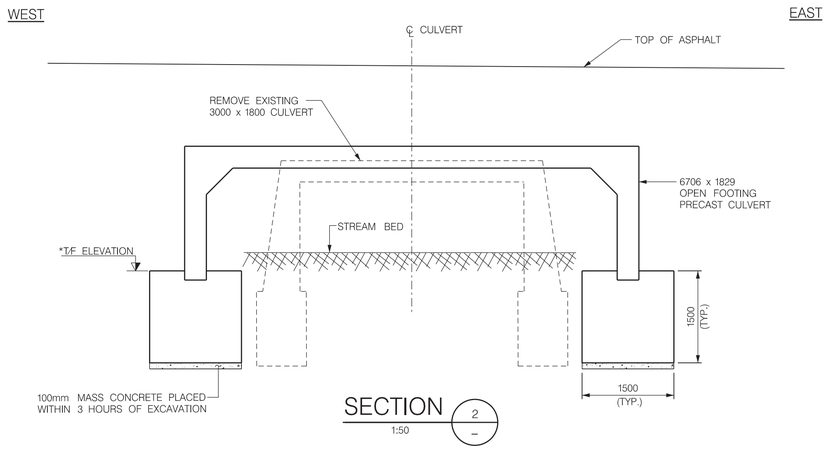


PLAN
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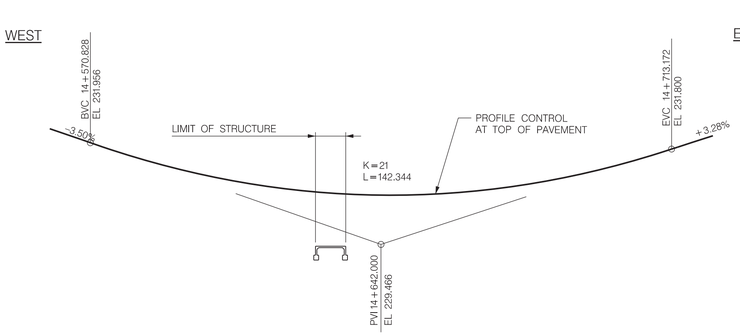


SECTION 1
1:125





SECTION 2
1:50



PROFILE OF MAYFIELD ROAD
N.T.S.

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

METRIC

DIMENSIONS ARE IN METRES
AND/OR MILLIMETRES
UNLESS OTHERWISE SHOWN

REVISIONS		
DATE	DETAILS	INIT.
MAR. 28, 2017	ISSUED FOR TENDER	D.M.
MAY 18, 2017	ISSUED FOR CONSTRUCTION	D.M.
JULY 7, 2017	REV 1: OPENING FOR GAS MAIN	D.M.
NOV 21, 2017	REV 2: OPENING FOR GAS MAIN	D.M.
MAR 21, 2018	REV 3: OPENING FOR GAS MAIN	D.M.
APR 19, 2018	REV 4: MNR REVISION	D.M.

GENERAL NOTES

DESIGN CODE : CHBDC CAN/CSA–S6–06
DESIGN LOAD : CL–625–ONT

CLASS OF CONCRETE

MASS CONCRETE 20MPa
PRECAST CONCRETE 35MPa
ALL CONCRETE (UNLESS OTHERWISE NOTED) 35MPa

CLEAR COVER TO REINFORCING STEEL

FOOTINGS ..... 100 ± 25mm
PRECAST CONCRETE..... 40 ± 10mm
REMAINDER (UNLESS OTHERWISE NOTED)..... 70 ± 20mm

REINFORCING STEEL

REINFORCING STEEL SHALL BE GRADE 400W UNLESS OTHERWISE SPECIFIED.

UNLESS SHOWN OTHERWISE, TENSION LAP SPLICES SHALL BE CLASS B.

BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL HOOKS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL STANDARD DRAWING SS12–1, UNLESS INDICATED OTHERWISE.

CONSTRUCTION NOTES

REMOVAL OF CULVERT AND ANY IN–WATER WORK IS PERMITED ONLY BETWEEN JULY 1 AND SEPTEMBER 15 UNLESS OTHERWISE GRANTED IN WRITING BY MNR.

BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH SIDES OF THE CULVERT KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN BACKFILL ELEVATION BE GREATER THAN 500mm.

FOR STAGING AND MAINTENANCE OF TRAFFIC, SEE CONSTRUCTION STAGING DRAWINGS.

APPLICABLE STANDARD DRAWINGS

OPSD – 803.010 BACKFILL AND COVER FOR CONCRETE CULVERTS

IBI Group
100-175 Galaxy Boulevard
Toronto ON M9W 0C9 Canada

LICENSED PROFESSIONAL ENGINEER
H. WANG
100147413
Mar. 21, 2018
PROVINCE OF ONTARIO
Designed by

LICENSED PROFESSIONAL ENGINEER
D.B. MOORE
Apr. 19, 2018
PROVINCE OF ONTARIO
Approved by

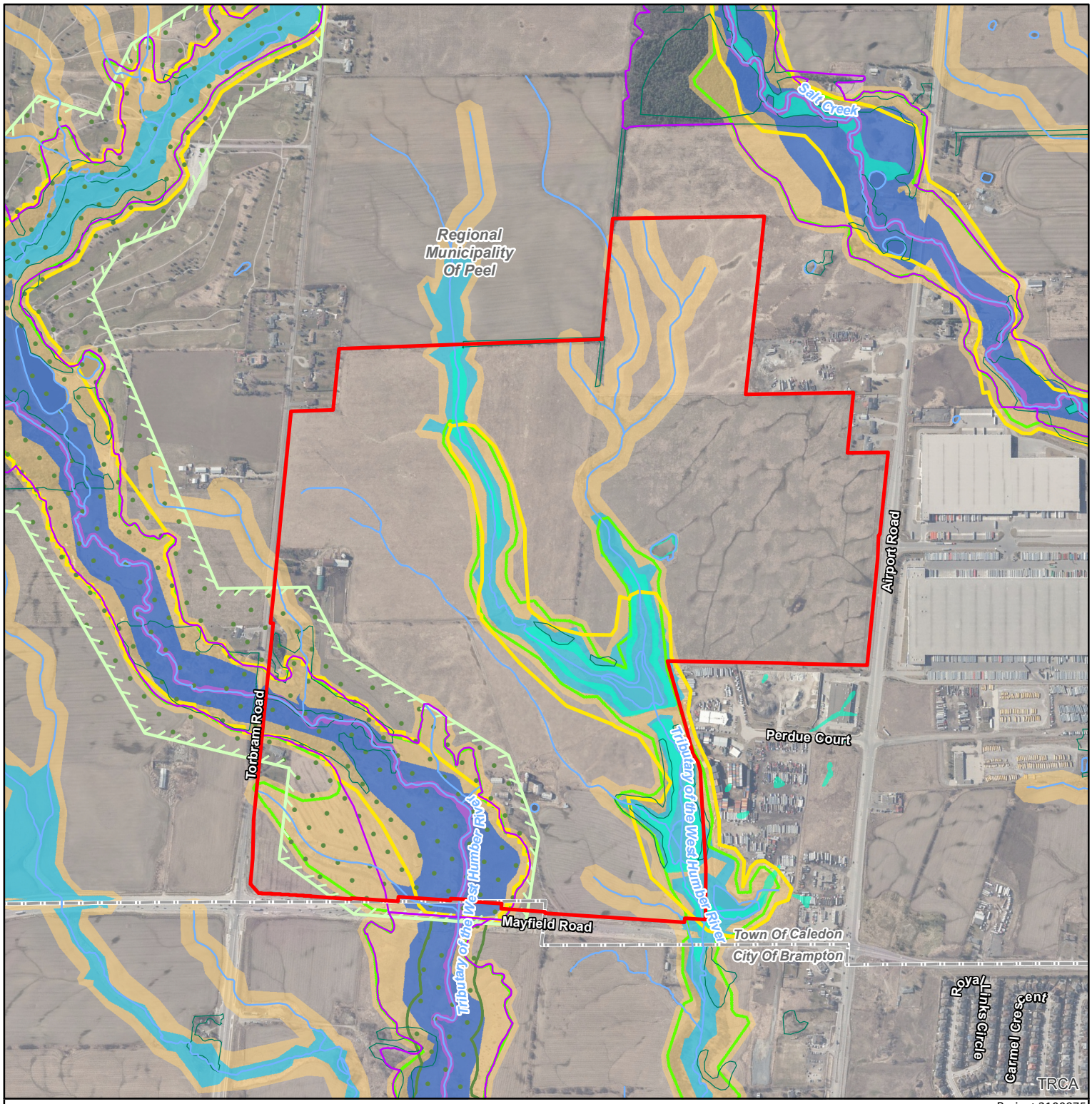
Region of Peel
Working for you

MAYFIELD ROAD

CULVERT AT 14 + 629.5
WEST OF AIRPORT ROAD (C–19)
GENERAL ARRANGEMENT

CAD Area	Area B-29 / C-05	Project No.	06-4040
Checked by D.B.M.	Drawn by A.M.S.		
Date FEB 6, 2017	Sheet 47 of 80	Plan No.	62301-D

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Project 2100975

Comprehensive Environmental Impact Study and Management Plan, Tullamore Employment Lands
Tullamore Industrial LP

Figure 2
Landscape Setting

NOTES:
1. Coordinate System: NAD 1983 UTM Zone 17N.
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021; Town of Caledon, 2021; Toronto Region Conservation Authority, 2021; Region of Peel, 2021.
3. Orthoimagery © First Base Solutions, 2021. Imagery taken in 2019.

Legend

- Subject Lands (approximate)
- Aquatic Species at Risk - Fish
- Watercourse (TRCA)
- Waterbody
- Wetland - Not Evaluated per OWES
- Wooded Area
- Municipal Boundary, Lower/Single Tier
- Greenbelt Boundary
- Greenbelt NHS
- Core Areas of the Greenlands System (Region of Peel)
- Environmental Policy Area (Town of Caledon)
- TRCA Regulation Limits
- Crest of Slope (TRCA)
- Meander Belt (TRCA)
- Flood Hazard (Engineered) (TRCA)
- Flood Hazard (Estimated) (TRCA)

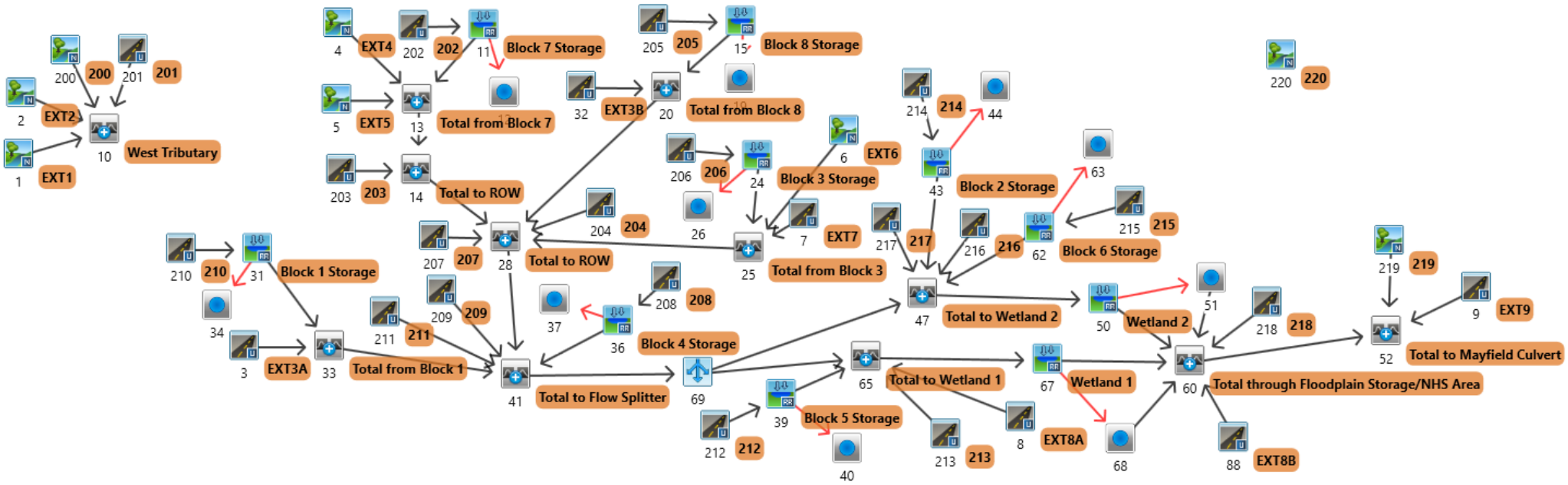
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GEI Consultants
Savanta Division

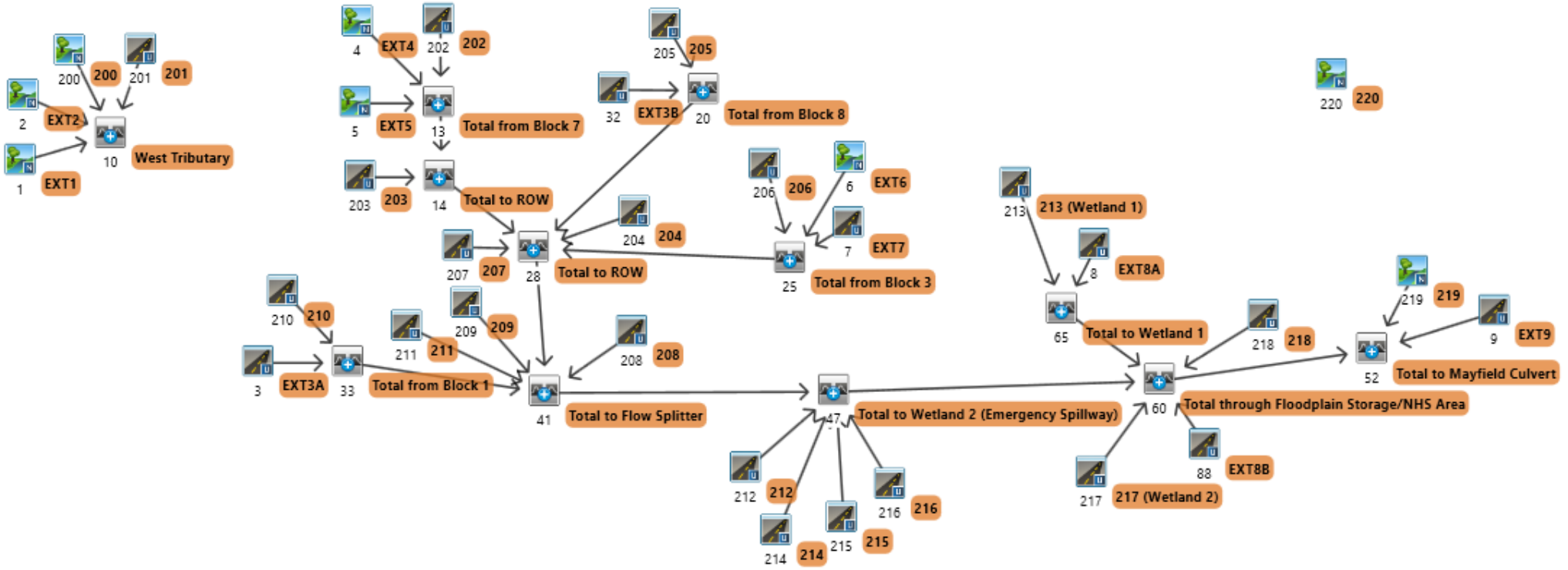
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APPENDIX D

Post-Development Stormwater Management



VO PROPOSED MODEL SCHEMATIC (2-YEAR TO 100-YEAR STORM)
DATE: 2023-01-17
BY: IC
CHECK: RA



VO PROPOSED MODEL SCHEMATIC (REGIONAL STORM, EMERGENCY OVERLAND)
DATE: 2023-01-17
BY: IC
CHECK: RA

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**200**
Catchment AREA (ha)	**29.1**

Hydrologic Parameters: NASHYD Command
Post-Development Drainage Area: Catchment 200

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	29.1
				0
Total Area Check				29.1

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveway		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		79				79					0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL									29.1	79	29.1

CN Calculations		
	Total Area	29.1
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	29.10	0.25	0.25
Impervious	0.00	0.90	0.00
Gravel	0.00	0.60	0.00
Total Subcatchment	**29.1**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	29.1	(Meadow)
Impervious	1	0.00	
Total	8.0	29.1	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
804.6	19	2.36%	2.3	0.35	0.63	0.38	0.38	0.46	0.31	0.99	0.66

Appropriate calculated time to peak:	0.66	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **201**
Catchment AREA (ha) **0.92**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 201

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.9
				0
Total Area Check				0.92

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		84		84			0.9	98			0.92
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL											0.00
			CN Calculations				Total Area				0.92
							Composite Curve Number				98

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Building	0.92	0.90	0.90
Total Subcatchment	**0.92**	**-**	**0.90**

TIMP **0.99**
XIMP **0.99**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.0
Impervious	1	0.9
Total	1.0	0.9

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	0.5	AUTO	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT1**
Catchment AREA (ha)	**0.6**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT1

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.6
				0
Total Area Check				0.6

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.10				0.00						0.10

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							0.5	79			0.5

CN Calculations		
	Total Area	0.6
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.50	0.25	0.21
Impervious	0.10	0.90	0.15
Total Subcatchment	**0.6**	**-**	**0.36**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	5	0.5	(Lawn)
Impervious	1	0.10	
Total	4.3	0.6	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
107	1	0.93%	2.3	0.22	0.13	0.08	0.08	0.11	0.07	0.43	0.29

Appropriate calculated time to peak:	0.29	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT2**
Catchment AREA (ha)	**1.3**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT2

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	1.3
				0
Total Area Check				1.3

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.20				0.00						0.20

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							1.1	79			1.1

CN Calculations		
	Total Area	1.3
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	1.10	0.25	0.21
Impervious	0.20	0.90	0.14
Total Subcatchment	**1.3**	**-**	**0.35**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	5	1.1	(Lawn)
Impervious	1	0.20	
Total	4.4	1.3	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
184	11	5.98%	2.3	0.56	0.09	0.05	0.05	0.12	0.08	0.31	0.21

Appropriate calculated time to peak:	0.21	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**202**
Catchment AREA (ha)	**18.2**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 202

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	55	10.01
Chinguacousy Clay Loam	CCL	C	45	8.19
Total Area Check				18.20

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	10.01	84						98			10.01
CCL	8.19	79									8.19
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00
			CN Calculations				Total Area				18.2
							Composite Curve Number				82

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	18.2	0.84	0.84
Total Subcatchment	**18.2**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	1.8
Impervious	1	16.4
Total	1.4	18.2

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	862	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT4**
Catchment AREA (ha)	**4.9**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT4

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	4.9
				0
Total Area Check				4.9

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		79			0.00						0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			4.9	79				79			4.9

CN Calculations		
	Total Area	4.9
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	4.90	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**4.9**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	4.9	(Meadow)
Impervious	1	0.00	
Total	8.0	4.9	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
180	1	0.56%	2.3	0.17	0.29	0.17	0.17	0.16	0.11	0.75	0.50

Appropriate calculated time to peak:	0.50	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT5**
Catchment AREA (ha)	**0.9**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT5

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.9
				0
Total Area Check				0.9

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.9	84							0.9

CN Calculations		
	Total Area	0.9
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.90	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**0.9**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	0.9	(Meadow)
Impervious	1	0.00	
Total	8.0	0.9	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
103	0.85	0.83%	2.3	0.21	0.14	0.08	0.08	0.10	0.07	0.50	0.33

Appropriate calculated time to peak:	0.33	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**203**
Catchment AREA (ha)	**0.9**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 203

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.90
				0
Total Area Check				0.90

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.9	84							0.90

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	0.90
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	0.9	0.84	0.84
Total Subcatchment	**0.9**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.09
Impervious	1	0.81
Total	1.4	0.90

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1.5	287	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **204**
Catchment AREA (ha) **1.7**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 204

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	62	1.05
Chinguacousy Clay Loam	CCL	C	38	0.65
Total Area Check				1.70

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC		98	1.05	84				98			1.05
CCL		98	0.65	79							0.65
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	1.7
	Composite Curve Number	82

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	1.7	0.84	0.84
Total Subcatchment	**1.7**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.2
Impervious	1	1.5
Total	1.4	1.7

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	641	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**205**
Catchment AREA (ha)	**17.3**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 205

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	84	14.53
Chinguacousy Clay Loam	CCL	C	16	2.77
Total Area Check				17.30

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	14.53	84						98			14.53
CCL	2.77	79									2.77
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00
			CN Calculations				Total Area				17.3
							Composite Curve Number				83

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	17.3	0.84	0.84
Total Subcatchment	**17.3**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	1.7
Impervious	1	15.6
Total	1.4	17.3

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	796	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **EXTB**
Catchment AREA (ha) **2.0**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT3B

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	2.0
				0
Total Area Check				2.0

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.80	79				79					0.80

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			0.34	79			0.86	79			1.20

CN Calculations		
	Total Area	2.00
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	1.20	0.25	0.15
Impervious	0.80	0.90	0.36
Total Subcatchment	**2.0**	**-**	**0.51**

TIMP	**0.44**
XIMP	**0.24**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Meadow	8	0.34
Pervious	5	0.86
Impervious	1	0.80
Total	3.9	2.00

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	0.7	607	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**206**
Catchment AREA (ha)	**20.2**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 206

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	20.20
Chinguacousy Clay Loam	CCL	C		
Total Area Check				20.20

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	20.20	84						98			20.20
CCL	0.00	79									0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	20.2
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	20.2	0.84	0.84
Total Subcatchment	**20.2**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	2.0
Impervious	1	18.2
Total	1.4	20.2

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	1015	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT6**
Catchment AREA (ha)	**0.5**

Hydrologic Parameters: NASHYD Command
Pre-Development Drainage Area: Catchment EXT6

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	0.5
				0
Total Area Check				0.5

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00				0.00						0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.5	84							0.5

CN Calculations		
	Total Area	0.5
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.50	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**0.5**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	0.5	(Meadow)
Impervious	1	0.00	
Total	8.0	0.5	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
79	2	2.53%	2.3	0.37	0.06	0.04	0.04	0.07	0.04	0.30	0.20

Appropriate calculated time to peak:	0.20	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **EXT7**
Catchment AREA (ha) **1.4**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT7

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	1.4
				0
Total Area Check				1.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC		98			1.40	84					1.40

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC								84			0.00

CN Calculations		
	Total Area	1.40
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.00	0.25	0.00
Gravel	1.40	0.60	0.60
Total Subcatchment	**1.4**	**-**	**0.60**

TIMP	**0.57**
XIMP	**0.37**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.00
Gravel	2.5	1.40
Impervious	1	0.00
Total	2.5	1.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1.2	74	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **207**
Catchment AREA (ha) **1.8**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 207

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	1.80
Chinguacousy Clay Loam	CCL	C	0	0
Total Area Check				1.80

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			1.80	84				98			1.80
CCL			0	79							0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00
					CN Calculations		Total Area				1.8
							Composite Curve Number				84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	1.8	0.84	0.84
Total Subcatchment	**1.8**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP **0.91**
XIMP **0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.2
Impervious	1	1.6
Total	1.4	1.8

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1.1	697	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**208**
Catchment AREA (ha)	**18.8**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 208

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	18.8
Chinguacousy Clay Loam	CCL	C	0	0
Total Area Check				18.8

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	18.8	84						98			18.80
CCL	0.00	79									0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	18.8
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	18.8	0.84	0.84
Total Subcatchment	**18.8**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	1.9
Impervious	1	16.9
Total	1.4	18.8

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	1031	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**209**
Catchment AREA (ha)	**1.8**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 209

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	1.8
Chinguacousy Clay Loam	CCL	C	0	0
Total Area Check				1.8

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			1.8	84				98			1.80
CCL			0	79							0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	1.8
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	1.8	0.84	0.84
Total Subcatchment	**1.8**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.2
Impervious	1	1.6
Total	1.4	1.8

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	0.9	661	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **210**
Catchment AREA (ha) **36.6**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 210

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	80	29.28
Peel Clay	PC	D	20	7.32
Total Area Check				36.60

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	29.28	79						98			29.28
PC	7.32	84									7.32
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL											0.00

CN Calculations		
	Total Area	36.6
	Composite Curve Number	80

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	36.6	0.84	0.84
Total Subcatchment	**36.6**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	3.7
Impervious	1	32.9
Total	1.4	36.6

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	1060	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **EXT3A**
Catchment AREA (ha) **1.4**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT3A

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	1.4
				0
Total Area Check				1.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.47	79				79					0.47

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL				79			0.93	79			0.93

CN Calculations		
	Total Area	1.40
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.93	0.25	0.17
Impervious	0.47	0.90	0.30
Total Subcatchment	**1.4**	**-**	**0.47**

TIMP	**0.38**
XIMP	**0.18**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Meadow	8	0.00
Pervious	5	0.93
Impervious	1	0.47
Total	3.7	1.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	153	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**211**
Catchment AREA (ha)	**0.9**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 211

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	42	0.38
Chinguacousy Clay Loam	CCL	C	58	0.522
Total Area Check				0.90

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.38	84				98		79	0.38
CCL			0.52	79							0.52
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	0.9
	Composite Curve Number	81

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	0.9	0.84	0.84
Total Subcatchment	**0.9**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.1
Impervious	1	0.8
Total	1.4	0.9

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	0.7	337	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **212**
Catchment AREA (ha) **17.7**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 212

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	88	15.58
Chinguacousy Clay Loam	CCL	C	12	2.124
Total Area Check				17.70

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	15.58	84						98			15.58
CCL	2.12	79									2.12
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00
			CN Calculations				Total Area				17.7
							Composite Curve Number				83

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	17.7	0.84	0.84
Total Subcatchment	**17.7**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP **0.91**
XIMP **0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	1.8
Impervious	1	15.9
Total	1.4	17.7

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	996	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**213**
Catchment AREA (ha)	**4.3**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 213 (Wetland 1)

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	0	0.00
Chinguacousy Clay Loam	CCL	C	100	4.3
Total Area Check				4.30

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC								98	4.30	79	4.30
											0

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	4.30
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
SWM Facility	4.3	0.50	0.50
Total Subcatchment	**4.3**	**-**	**0.50**

TIMP	**0.50**
XIMP	**0.50**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	2.2
Impervious	1	2.2
Total	3.0	4.3

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	2	307	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **EXT8A**
Catchment AREA (ha) **0.4**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT8A

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.4
				0
Total Area Check				0.4

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		98			0.40	79					0.40
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL								84			0.00

CN Calculations		
	Total Area	0.40
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.00	0.25	0.00
Gravel	0.40	0.60	0.60
Total Subcatchment	**0.4**	**-**	**0.60**

TIMP	**0.57**
XIMP	**0.37**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.00
Gravel	2.5	0.40
Impervious	1	0.00
Total	2.5	0.40

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	2	57	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **214**
Catchment AREA (ha) **9.68**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 214

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	9.68
Total Area Check				9.68

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	9.68	79						98			9.68
											0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL											0.00

CN Calculations		
	Total Area	9.68
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	9.68	0.84	0.84
Total Subcatchment	**9.68**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.97
Impervious	1	8.71
Total	1.4	9.68

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	607	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**215**
Catchment AREA (ha)	**3.9**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 215

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	0	0.00
Chinguacousy Clay Loam	CCL	C	100	3.9
Total Area Check				3.90

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC	0.00	84						98			0.00
CCL	3.90	79									3.90
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	3.9
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Industrial Land**	3.9	0.84	0.84
Total Subcatchment	**3.9**	**-**	**0.84**

*Minimum landscape requirement for industrial blocks is 10%

TIMP	**0.91**
XIMP	**0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.4
Impervious	1	3.5
Total	1.4	3.9

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	347	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **216**
Catchment AREA (ha) **1.6**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 216

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	42	0.67
Chinguacousy Clay Loam	CCL	C	58	0.928
Total Area Check				1.60

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC			0.67	84				98		79	0.67
CCL			0.93	79							0.93
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	1.6
	Composite Curve Number	81

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
*Roadway**	1.6	0.84	0.84
Total Subcatchment	**1.6**	**-**	**0.84**

*Minimum 10% landscaping for 26.0m municipal ROWs per standard cross section

TIMP **0.91**
XIMP **0.71**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.2
Impervious	1	1.4
Total	1.4	1.6

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	455	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**217**
Catchment AREA (ha)	**4.5**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 217 (Wetland 2)

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	0	0.00
Chinguacousy Clay Loam	CCL	C	100	4.5
Total Area Check				4.50

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC								98	4.50	79	4.50
											0

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	4.50
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
SWM Facility	4.5	0.50	0.50
Total Subcatchment	**4.5**	**-**	**0.50**

TIMP	**0.50**
XIMP	**0.50**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	2.3
Impervious	1	2.3
Total	3.0	4.5

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	2	220	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **218**
Catchment AREA (ha) **4.0**

Hydrologic Parameters: STANDHYD Command
Post-Development Drainage Area: Catchment 218 (NHS)

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	0	0.00
Chinguacousy Clay Loam	CCL	C	100	4
Total Area Check				4.00

Impervious Landuses Present:											
	Industrial Land		Roadway		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC								98	4.00	79	4.00
											0

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

CN Calculations		
	Total Area	4.00
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Floodplain Area (NHS)	4.0	0.50	0.50
Total Subcatchment	**4.0**	**-**	**0.50**

TIMP **0.50**
XIMP **0.50**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	2.0
Impervious	1	2.0
Total	3.0	4.0

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	1	281	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**219**
Catchment AREA (ha)	**1.0**

Hydrologic Parameters: NASHYD Command
Post-Development Drainage Area: Catchment 219

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	D	100	1.0
				0
Total Area Check				1.0

Impervious Landuses Present:											
	Roadway		Sidewalk		Gravel Parking Lot		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.00				0.00						0.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL			1.0	79							1.0
					CN Calculations		Total Area				1.0
							Composite Curve Number				79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	1.00	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**1.0**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	1.0	(Meadow)
Impervious	1	0.00	
Total	8.0	1.0	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
94	0.71	0.76%	2.3	0.20	0.13	0.08	0.08	0.09	0.06	0.49	0.33

Appropriate calculated time to peak:	0.33	Appropriate Method:	Airport

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME **EXT8B**
Catchment AREA (ha) **1.0**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT8

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	1.0
				0
Total Area Check				1.0

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL		98			1.00	79					1.00
Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL								84			0.00
			CN Calculations				Total Area				1.00
							Composite Curve Number				79

Runoff Coefficient Calculations

Land Use	Area (ha)	C	Weighted Average C
Pervious	0.00	0.25	0.00
Gravel	1.00	0.60	0.60
Total Subcatchment	**1.0**	**-**	**0.60**

TIMP	**0.57**
XIMP	**0.37**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.00
Gravel	2.5	1.00
Impervious	1	0.00
Total	2.5	1.00

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	-	-	0.25
Impervious	1.0	2	93	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**EXT9**
Catchment AREA (ha)	**0.9**

Hydrologic Parameters: STANDHYD Command
Pre-Development Drainage Area: Catchment EXT9

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Chinguacousy Clay Loam	CCL	C	100	0.9
				0
Total Area Check				0.9

Impervious Landuses Present:											
	Roadway/Rooftops		Sidewalk		Gravel Area		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL	0.45	79				79					0.45

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Roadside Ditch		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
CCL							0.45	79			0.45

CN Calculations		
	Total Area	0.90
	Composite Curve Number	79

Runoff Coefficient Calculations

Land Use	**Area (ha)**	**C**	**Weighted Average C**
Pervious	0.45	0.25	0.13
Impervious	0.45	0.90	0.45
Total Subcatchment	**0.9**	**-**	**0.58**

TIMP	**0.54**
XIMP	**0.34**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)
Pervious	5	0.45
Impervious	1	0.45
Total	3.0	0.90

Flow Length Calculations

Land Use	IA (mm)	Slope (%)	Travel Length (m)	Manning's n
Pervious	5.0	2	313	0.25
Impervious	1.0	1	309	0.013

Project Name: Tullamore Lands
Project Number: 2022-5842
Date: 2023-01-17
By: IC
Check: RA

Catchment NAME	**220**
Catchment AREA (ha)	**8.0**

Hydrologic Parameters: NASHYD Command
Post-Development Drainage Area: Catchment 220

Curve Number Calculation

Soil Types Present:				
Type	ID	Hydrologic Group	% Area	Area
Peel Clay	PC	D	100	8.00
				0
Total Area Check				8.0

Impervious Landuses Present:											
	Driveway/Rooftop		Sidewalk		Gravel Driveway		Building		SWMF		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC											0.00

Pervious Landuses Present:											
	Woodland		Meadow		Wetland		Lawn		Cultivated		Subtotal
Soils	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area (ha)	CN	Area
PC									8.0	84	8.0

CN Calculations		
	Total Area	8.0
	Composite Curve Number	84

Runoff Coefficient Calculations

Land Use	**Area** (ha)	**C**	**Weighted Average C**
Pervious	8.00	0.25	0.25
Impervious	0.00	0.90	0.00
Total Subcatchment	**8.0**	**-**	**0.25**

Initial Abstraction Calculations

Landuse	IA (mm)	Area (ha)	
Pervious	8	8.0	(Meadow)
Impervious	1	0.00	
Total	8.0	8.0	

Time to Peak Calculations

Time to Peak Inputs					Uplands			Bransby Williams		Airport	
Length (m)	Drop (m)	Slope (%)	$V/S^{0.5}$	Velocity (m/s)	Tc (hr)	Tp(hr)	TOTAL Tp (hr)	Tc (hr)	Tp(hr)	Tc (hr)	Tp(hr)
380	10	2.63%	2.3	0.37	0.28	0.17	0.17	0.24	0.16	0.65	0.44

Appropriate calculated time to peak:	0.44	Appropriate Method:	Airport

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```
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```
                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\bcaa75a3-3533-4d39-8829-315406844725\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\bcaa75a3-3533-4d39-8829-315406844725\sce


DATE: 01-19-2023                          TIME: 11:39:10

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 1. 2-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                   min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.37  3.50   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.01  2.92  10.12 0.28   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.03  2.83  10.06 0.28   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.08  2.75  34.95 0.97   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.05  2.83  10.08  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.39  3.42   9.40  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.40  3.42  10.14  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.27  2.75  31.34 0.87   0.000
```

```
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.47  3.50  31.33  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.23  2.75  31.49 0.87   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.45  3.50  31.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.37  2.83  31.64 0.88   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.51  3.50  31.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    2.41  2.83  30.92 0.86   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    0.90  3.50  30.91  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.27  2.83  31.64 0.88   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.47  3.50  31.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.28  2.75  31.49 0.87   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.46  3.42  31.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.71  2.75  30.92 0.86   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.25  3.42  30.90  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.07  3.25   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.02  3.00  12.51 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.54  3.42  26.67  n/a   0.000
```

```
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.55  3.42  26.14  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.07  2.75  31.63 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.57  3.33  26.34  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.02  2.83  12.49 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.08  2.75  23.18 0.64   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.52  3.50  31.17  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.54  3.42  30.66  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.07  2.83  18.46 0.51   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.49  3.33  30.13  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.13  2.75  31.33 0.87   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.13  2.75  31.63 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.06  3.33  27.99  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.11  3.25  28.12  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    1.17  3.25  28.25  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    1.71  3.25  29.01  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.05  2.75  16.64 0.46   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    0.92  3.50  30.39  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.07  2.75  31.05 0.86   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.13  2.75  31.63 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.20  2.75  31.44  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    1.79  3.25  29.10  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    2.68  3.33  29.54  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    3.14  3.33  29.85  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    3.14  3.33  29.85  n/a   0.000
       Outflow           0002  2  5.0   64.65    1.57  3.33  29.85  n/a   0.000
       Outflow           0002  3  5.0   64.65    1.57  3.33  29.85  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.24  2.75  22.70 0.63   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.31  2.75  30.92 0.86   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.10  3.25  30.88  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.12  2.75  31.05 0.86   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.36  2.75  24.89  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.53  2.75  28.58  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.62  2.75  29.03  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    2.06  3.25  29.66  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.23  8.08  28.70  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.02  2.75  21.54 0.60   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.22  2.75  22.70 0.63   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.55  3.25  29.76  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    2.12  3.33  29.83  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    2.13  3.25  29.79  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    0.30  7.75  29.20  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.21  2.75  22.70 0.63   0.000
    [I%=50.0:S%= 2.00]
*
```

```
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.05  2.75  21.55 0.60   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.23  8.08  28.43  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.23  8.08  28.43  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    0.53  7.92  28.81  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    0.53  7.92  28.81  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    0.53  7.92  28.77  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.02  3.00   9.36 0.26   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.03  2.75  20.91 0.58   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    0.53  7.92  28.66  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    0.53  7.92  28.62  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 36.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\f069ea20-89eb-4b0b-a567-f3
    remark: 2 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.17  3.17  12.52 0.35   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
 FINISH
```

==========

==========

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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```

***** S U M M A R Y O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\2b99f3cd-4922-46a6-9cf8-7e48575fa5fd\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\2b99f3cd-4922-46a6-9cf8-7e48575fa5fd\sce

DATE: 01-19-2023                          TIME: 11:39:09

USER:

COMMENTS: _____________________________________________________

  ************************************************
  ** SIMULATION : 2. 5-Year                     **
  ************************************************
```

```
                                                                    6-Hour AES Storms
  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.67  3.42  16.58 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.02  2.92  17.04 0.36   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.06  2.83  16.96 0.35   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.11  2.75  46.76 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.08  2.83  16.99  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.71  3.42  16.61  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.73  3.42  17.48  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.77  2.75  42.76 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.64  3.42  42.75  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.75  2.75  42.94 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.62  3.42  42.93  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.94  2.75  43.12 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.70  3.50  43.11  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    3.42  2.83  42.24 0.88   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.24  3.50  42.24  n/a   0.000
*
```

```
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.80  2.75  43.12 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.65  3.50  43.11  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.81  2.75  42.94 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.63  3.33  42.93  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.00  2.75  42.24 0.88   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.34  3.33  42.22  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.13  3.25  16.58 0.35   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.04  2.92  21.28 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.77  3.33  37.20  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.80  3.33  36.60  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.10  2.75  43.11 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.83  3.25  36.84  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  2.83  21.25 0.44   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.12  2.75  33.23 0.69   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.71  3.42  42.58  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.75  3.42  41.99  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.11  2.83  27.43 0.57   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.68  3.25  41.32  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.18  2.75  42.76 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.19  2.75  43.11 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.51  3.25  38.80  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.58  3.25  38.94  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    1.66  3.17  39.10  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    2.41  3.25  40.02  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.08  2.75  25.17 0.53   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.27  3.42  41.61  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.10  2.75  42.40 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.19  2.75  43.11 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.28  2.75  42.88  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    2.52  3.17  40.12  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    3.76  3.25  40.63  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    4.40  3.25  40.99  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    4.40  3.25  40.99  n/a   0.000
       Outflow           0002  2  5.0   64.65    2.20  3.25  40.99  n/a   0.000
       Outflow           0002  3  5.0   64.65    2.20  3.25  40.99  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.35  2.75  32.02 0.67   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.43  2.75  42.24 0.88   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.14  3.25  42.20  n/a   0.000
*
```

```
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.17  2.75  42.41 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.52  2.75  34.75  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.76  2.75  39.33  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.88  2.75  39.90  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    2.88  3.25  40.74  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.50  7.25  39.71  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.03  2.75  30.98 0.65   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.32  2.75  32.02 0.67   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.77  3.25  40.80  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    2.97  3.25  40.94  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    2.98  3.25  40.90  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    0.65  6.92  40.27  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.30  2.75  32.02 0.67   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.08  2.75  30.99 0.65   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.50  7.25  39.36  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.50  7.25  39.36  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    1.15  7.00  39.81  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    1.15  7.00  39.81  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    1.15  7.00  39.76  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.03  2.92  16.58 0.35   0.000
    [CN=82.0        ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  2.75  30.31 0.63   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    1.15  7.00  39.63  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    1.15  7.00  39.59  n/a   0.000
```

```
*
    READ STORM                15.0
    [ Ptot= 47.81 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\5b5f45ef-318d-4b91-b5cd-9c
    remark: 5 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.31  3.08  21.29 0.45   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\0cff6051-a645-40f2-a683-234812ff4988\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\0cff6051-a645-40f2-a683-234812ff4988\sce


DATE: 01-19-2023                          TIME: 11:39:07

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 3. 10-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                   min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.90  3.42  21.99 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.03  2.92  22.20 0.40   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.07  2.83  22.11 0.40   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.13  2.75  54.64 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.10  2.83  22.14  n/a   0.000
*
```

```
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.95  3.33  21.99  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.97  3.33  22.94  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    2.16  2.75  50.45 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.76  3.42  50.44  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    2.08  2.75  50.64 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.73  3.33  50.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    2.32  2.75  50.84 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.83  3.42  50.83  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    4.10  2.75  49.88 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.47  3.50  49.87  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    2.16  2.75  50.84 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.77  3.42  50.83  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    2.19  2.75  50.64 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.75  3.33  50.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.20  2.75  49.88 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.41  3.33  49.86  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.18  3.17  21.98 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
```

```
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.05  2.92  27.62 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.93  3.33  44.40  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.97  3.25  43.77  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.12  2.75  50.83 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.01  3.25  44.03  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.04  2.75  27.57 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.14  2.75  40.18 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.85  3.42  50.27  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.89  3.25  49.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.14  2.83  33.79 0.61   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.81  3.25  48.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.21  2.75  50.44 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.22  2.75  50.83 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.82  3.25  46.15  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.90  3.17  46.31  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.01  3.08  46.48  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    2.88  3.25  47.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.11  2.75  31.27 0.56   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.51  3.42  49.19  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
```

```
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.11  2.75  50.06 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.22  2.75  50.83 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.34  2.75  50.57  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    3.02  3.08  47.59  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    4.49  3.25  48.14  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    5.25  3.25  48.53  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    5.25  3.25  48.53  n/a   0.000
       Outflow           0002  2  5.0   64.65    2.63  3.25  48.53  n/a   0.000
       Outflow           0002  3  5.0   64.65    2.63  3.25  48.53  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.42  2.75  38.51 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.51  2.75  49.88 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.17  3.17  49.84  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.20  2.75  50.06 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.62  2.75  41.54  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.92  2.75  46.64  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.06  2.75  47.28  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    3.44  3.25  48.24  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.75  6.83  47.19  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.04  2.75  37.58 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.39  2.75  38.51 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.93  2.75  48.26  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    3.54  3.25  48.46  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    3.55  3.25  48.41  n/a   0.000
*
 ** Reservoir
```

```
    OUTFLOW:             0067  1  5.0   87.05    0.91  6.58  47.77  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.37  2.75  38.51 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.10  2.75  37.59 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.75  6.75  46.79  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.75  6.75  46.79  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    1.66  6.67  47.28  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    1.66  6.67  47.28  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    1.66  6.67  47.23  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.05  2.92  21.98 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.05  2.75  36.88 0.66   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    1.66  6.58  47.08  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    1.66  6.58  47.03  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 55.69 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\8957092f-5401-4bd8-8614-7d
    remark: 10 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.41  3.08  27.62 0.50   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\55581674-8b7d-441f-9af0-a5c5d20d72ba\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\55581674-8b7d-441f-9af0-a5c5d20d72ba\sce


DATE: 01-19-2023                          TIME: 11:39:09

USER:


COMMENTS: _____________________________________________________
```

```
  ************************************************
  ** SIMULATION : 4. 25-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.21  3.42  29.26 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.04  2.83  29.15 0.44   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.10  2.83  29.04 0.44   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.15  2.75  64.54 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.14  2.83  29.08  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.27  3.33  29.25  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.30  3.25  30.27  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    2.61  2.75  60.16 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.91  3.33  60.15  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    2.55  2.75  60.37 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.88  3.33  60.36  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    2.81  2.75  60.58 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.00  3.42  60.57  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0210  1  5.0   36.60    4.97  2.75  59.53 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.76  3.42  59.53  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    2.61  2.75  60.58 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.93  3.42  60.57  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    2.64  2.75  60.37 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.90  3.33  60.36  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.44  2.75  59.53 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.49  3.33  59.51  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.24  3.17  29.26 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  2.92  35.95 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.14  3.25  53.60  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.19  3.25  52.93  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.14  2.75  60.57 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.24  3.25  53.21  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.05  2.75  35.89 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.18  2.75  49.12 0.75   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.02  3.42  59.97  n/a   0.000
*
```

```
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.07  3.25  59.29  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.18  2.83  42.08 0.64   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.98  3.17  58.46  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.25  2.75  60.15 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.27  2.75  60.57 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.22  3.25  55.50  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.32  3.17  55.68  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.45  3.00  55.86  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    3.49  3.17  56.94  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.14  2.75  39.26 0.60   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.81  3.42  58.78  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.14  2.75  59.73 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.27  2.75  60.57 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.41  2.75  60.29  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    3.69  2.92  57.07  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    5.42  3.25  57.66  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    6.33  3.25  58.08  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    6.33  3.25  58.08  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.17  3.25  58.08  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.17  3.25  58.08  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.51  2.75  46.89 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.61  2.75  59.53 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.20  3.17  59.49  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.24  2.75  59.73 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.76  2.75  50.26  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    1.11  2.75  55.94  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.29  2.75  56.64  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    4.14  3.25  57.74  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.04  6.50  56.67  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.05  2.75  46.11 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.48  2.75  46.88 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.13  2.75  57.72  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    4.26  3.25  57.99  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    4.28  3.25  57.94  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.18  6.42  57.28  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.45  2.75  46.89 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.12  2.75  46.12 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.05  6.25  56.23  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.05  6.25  56.23  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    2.23  6.25  56.75  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    2.23  6.25  56.75  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    2.23  6.25  56.69  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.06  2.92  29.25 0.45   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.07  2.75  45.40 0.69   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    2.23  6.25  56.54  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    2.24  6.25  56.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 65.59 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\7a5d2602-5a3e-411d-9a58-41
    remark: 25 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.53  3.08  35.96 0.55   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\130ac1d5-b4c0-4f51-a602-3539276e0a29\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\130ac1d5-b4c0-4f51-a602-3539276e0a29\sce


DATE: 01-19-2023                          TIME: 11:39:08

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 5. 50-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.45  3.33  34.99 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.05  2.83  34.63 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.12  2.83  34.52 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.17  2.75  71.95 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.16  2.83  34.55  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.53  3.33  34.96  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.57  3.25  36.03  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    2.99  2.75  67.45 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    1.03  3.33  67.44  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    2.87  2.75  67.67 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.98  3.33  67.66  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    3.24  2.75  67.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.12  3.42  67.88  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    5.74  2.75  66.79 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.98  3.42  66.78  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    3.01  2.75  67.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    1.04  3.42  67.88  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    2.97  2.75  67.67 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    1.01  3.33  67.66  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.62  2.75  66.79 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.55  3.33  66.77  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
```

```
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.29  3.17  34.99 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.08  2.92  42.39 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.31  3.25  60.56  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.37  3.25  59.87  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.16  2.75  67.88 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.42  3.17  60.16  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.06  2.75  42.32 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.21  2.75  55.92 0.77   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.14  3.33  67.27  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.21  3.25  66.55  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.21  2.83  48.45 0.66   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    1.10  3.08  65.67  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.29  2.75  67.44 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.30  2.75  67.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.52  3.17  62.57  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.64  3.08  62.75  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.81  2.92  62.94  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    3.97  3.08  64.08  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.16  2.75  45.45 0.62   0.000
```

```
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    2.04  3.33  66.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.16  2.75  67.00 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.30  2.75  67.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.46  2.75  67.59  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    4.26  2.83  64.21  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    6.14  3.17  64.83  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    7.17  3.25  65.27  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    7.17  3.25  65.27  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.58  3.25  65.27  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.58  3.25  65.27  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.60  2.75  53.30 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.69  2.75  66.79 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.23  3.08  66.75  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.28  2.75  67.01 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.88  2.75  56.89  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    1.28  2.75  62.95  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.48  2.75  63.71  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    4.68  3.08  64.91  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.24  6.42  63.82  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.06  2.75  52.64 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.55  2.75  53.30 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.29  2.75  64.85  n/a   0.000
```

```
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    4.82  3.25  65.17  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    4.84  3.17  65.11  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.38  6.25  64.45  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.51  2.75  53.29 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.14  2.75  52.65 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.25  6.25  63.34  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.25  6.25  63.34  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    2.62  6.25  63.89  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    2.62  6.25  63.89  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    2.63  6.25  63.83  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.08  2.92  34.98 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.08  2.75  51.92 0.71   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    2.63  6.25  63.67  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    2.64  6.25  63.61  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\ab1e6cd4-47d9-4b39-8792-b8
    remark: 50 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.63  3.00  42.40 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\46cb5e5b-d495-43e8-be19-a04a2cafd383\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\46cb5e5b-d495-43e8-be19-a04a2cafd383\sce
```

DATE: 01-19-2023 TIME: 11:39:09

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 6. 100-Year                   **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.70  3.33  40.83 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.06  2.83  40.23 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.14  2.83  40.11 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.19  2.75  79.26 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.19  2.83  40.15  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.80  3.33  40.79  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.84  3.25  41.90  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    3.33  2.75  74.66 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    1.14  3.33  74.65  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    3.20  2.75  74.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    1.09  3.33  74.88  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    3.60  2.75  75.12 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.24  3.33  75.11  n/a   0.000
```

```
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    6.40  2.75  73.97 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    2.20  3.42  73.97  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    3.35  2.75  75.12 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    1.15  3.33  75.11  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    3.30  2.75  74.89 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    1.12  3.33  74.88  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.80  2.75  73.97 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.61  3.25  73.95  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.34  3.17  40.83 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.10  2.92  48.88 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.47  3.25  67.48  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.54  3.17  66.78  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.18  2.75  75.11 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.60  3.17  67.08  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.07  2.75  48.80 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.24  2.75  62.71 0.78   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.27  3.33  74.48  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.34  3.25  73.73  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.24  2.83  54.86 0.68   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    1.23  3.08  72.81  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.32  2.75  74.66 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.34  2.75  75.12 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.82  3.17  69.58  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.96  3.08  69.77  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    3.15  2.92  69.97  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    4.43  3.00  71.16  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.18  2.75  51.69 0.64   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    2.27  3.33  73.14  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.17  2.75  74.19 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.34  2.75  75.12 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.51  2.75  74.81  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    4.78  2.83  71.30  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    6.84  3.17  71.93  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    7.98  3.25  72.39  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    7.98  3.25  72.39  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.99  3.25  72.39  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.99  3.25  72.39  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.68  2.75  59.72 0.74   0.000
    [I%=50.0:S%= 2.00]
```

```
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.76  2.75  73.97 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.25  3.08  73.93  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.31  2.75  74.20 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.99  2.75  63.51  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    1.44  2.75  69.92  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.66  2.75  70.71  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    5.23  2.75  72.00  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.43  6.33  70.90  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.06  2.75  59.18 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.62  2.75  59.72 0.74   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.45  2.75  71.92  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    5.36  3.17  72.27  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    5.39  3.17  72.21  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.65  6.08  71.55  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.60  2.75  59.72 0.74   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.15  2.75  59.19 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.44  6.25  70.40  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.44  6.25  70.40  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    3.09  6.17  70.97  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    3.09  6.17  70.97  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    3.10  6.17  70.90  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.09  2.92  40.82 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
```

```
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.09  2.75  58.45 0.73   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    3.10  6.17  70.73  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    3.11  6.17  70.67  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.31 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\0d555b13-6582-44e7-a68b-85
    remark: 100 Year 6 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.73  3.00  48.89 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\1cb31032-57c3-415c-9db7-aca32c8abce3\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\1cb31032-57c3-415c-9db7-aca32c8abce3\sce


DATE: 01-19-2023                          TIME: 11:39:08

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 7. 25 mm                      **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.16  2.67   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.01  2.00   4.86 0.19   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.02  1.92   4.81 0.19   0.000
    [CN=79.0         ]
```

```
    [ N = 3.0:Tp 0.21]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.13  1.67  23.96 0.96   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.02  1.92   4.82  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.17  2.58   4.03  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.18  2.58   4.60  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.20  1.83  20.89 0.84   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.33  2.50  20.88  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.17  1.83  21.00 0.84   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.32  2.50  20.99  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.29  1.83  21.11 0.84   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.37  2.58  21.10  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    2.27  1.83  20.58 0.82   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    0.64  2.58  20.58  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.20  1.83  21.11 0.84   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.34  2.58  21.10  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.31  1.75  21.00 0.84   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.33  2.42  20.99  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.73  1.75  20.58 0.82   0.000
    [I%=71.0:S%= 2.00]
*
```

```
** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.18  2.33  20.57  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.03  2.42   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.01  2.17   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.36  2.50  17.29  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.37  2.50  16.86  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.09  1.67  21.10 0.84   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.38  2.42  17.01  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.01  1.92   5.59 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.08  1.67  14.45 0.58   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.37  2.50  20.73  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.38  2.50  20.33  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.05  1.75  10.93 0.44   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.35  2.42  19.95  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.13  1.75  20.88 0.84   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.14  1.75  21.10 0.84   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    0.73  2.42  18.29  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    0.76  2.33  18.39  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    0.80  2.25  18.49  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    1.18  2.33  19.07  n/a   0.000
*
```

```
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.04  1.67   9.61 0.38   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    0.65  2.50  20.17  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.07  1.75  20.68 0.83   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.13  1.75  21.11 0.84   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.21  1.75  20.96  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    1.24  2.25  19.14  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    1.87  2.33  19.50  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    2.20  2.42  19.73  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    2.20  2.42  19.73  n/a   0.000
       Outflow           0002  2  5.0   64.65    1.10  2.42  19.73  n/a   0.000
       Outflow           0002  3  5.0   64.65    1.10  2.42  19.73  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.30  1.67  14.58 0.58   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.36  1.67  20.58 0.82   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.07  2.25  20.54  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.13  1.75  20.68 0.83   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.41  1.67  16.18  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.47  1.67  18.87  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.51  1.67  19.20  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    1.43  2.33  19.61  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.09  7.92  18.89  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.02  1.67  13.41 0.54   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
```

```
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.26  1.67  14.58 0.58   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.39  2.17  19.74  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    1.49  2.33  19.73  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    1.49  2.33  19.70  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    0.09  8.08  19.24  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.24  1.67  14.58 0.58   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.06  1.67  13.43 0.54   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.25  1.67  18.69  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.25  1.67  18.69  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    0.25  1.67  18.97  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    0.25  1.67  18.97  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    0.31  1.67  18.93  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.01  2.17   3.97 0.16   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  1.67  12.87 0.51   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    0.31  1.67  18.85  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    0.34  1.67  18.82  n/a   0.000
*
    READ STORM                10.0
    [ Ptot= 25.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\625353d4-8911-4d06-a996-194c9194a7eb\c34d843e-48bb-424d-86dd-59
    remark: 25mm_4hr_Chicago
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.08  2.33   5.60 0.22   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
```

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
```

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***** S U M M A R Y O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\70b7be35-06a7-47bf-acf4-3c5edc454836\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\70b7be35-06a7-47bf-acf4-3c5edc454836\sce


DATE: 01-19-2023                          TIME: 11:41:37

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 1. 2-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.38  5.75  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.01  5.33  13.50 0.32   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.03  5.25  13.43 0.32   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.05  5.25  40.95 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.04  5.25  13.45  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.40  5.67  12.91  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.42  5.67  13.72  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    0.84  5.25  37.12 0.88   0.000
```

```
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.49  5.75  37.12  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    0.81  5.25  37.29 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.47  5.67  37.28  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    0.93  5.25  37.45 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.54  5.83  37.45  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    1.64  5.25  36.65 0.87   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    0.94  5.83  36.65  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    0.86  5.25  37.45 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.50  5.83  37.45  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    0.84  5.25  37.29 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.48  5.67  37.28  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.46  5.25  36.65 0.87   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.26  5.67  36.64  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.08  5.50  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.02  5.33  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.56  5.67  31.98  n/a   0.000
```

```
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.58  5.67  31.41  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.04  5.25  37.44 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.59  5.67  31.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.01  5.25  16.81 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.05  5.25  28.22 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.54  5.75  36.95  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.56  5.75  36.39  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.05  5.33  22.92 0.55   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.51  5.67  35.79  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.08  5.25  37.12 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.09  5.25  37.45 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.11  5.67  33.44  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.16  5.58  33.58  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    1.22  5.50  33.73  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    1.77  5.58  34.57  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.04  5.25  20.87 0.50   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    0.96  5.75  36.06  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.04  5.25  36.79 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.09  5.25  37.45 0.89   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.13  5.25  37.23  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    1.86  5.50  34.67  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    2.79  5.58  35.15  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    3.28  5.67  35.48  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    3.28  5.67  35.48  n/a   0.000
       Outflow           0002  2  5.0   64.65    1.64  5.67  35.48  n/a   0.000
       Outflow           0002  3  5.0   64.65    1.64  5.67  35.48  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.16  5.25  27.37 0.65   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.19  5.25  36.65 0.87   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.11  5.50  36.62  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.08  5.25  36.80 0.88   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.23  5.25  29.84  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.46  5.25  34.01  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.56  5.25  34.53  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    2.13  5.58  35.26  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.35 10.08  34.21  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.01  5.25  26.25 0.63   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.15  5.25  27.37 0.65   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.57  5.33  35.34  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    2.20  5.58  35.45  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    2.21  5.58  35.41  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    0.43  9.75  34.76  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.14  5.25  27.37 0.65   0.000
    [I%=50.0:S%= 2.00]
*
```

```
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.04  5.25  26.27 0.63   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.35 10.00  33.90  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.35 10.00  33.90  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    0.78  9.83  34.33  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    0.78  9.83  34.33  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    0.78  9.83  34.28  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.02  5.33  12.88 0.31   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.02  5.25  25.60 0.61   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    0.78  9.83  34.16  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    0.79  9.83  34.12  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 42.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f355e108-5ed8-43cb-988d-3c
    remark: 2 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.18  5.42  16.84 0.40   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
==============================================================================================================


       V    V   I    SSSSS  U   U    A    L              (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\a1582121-131e-4bf5-8350-3936baf6e959\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\a1582121-131e-4bf5-8350-3936baf6e959\sce


DATE: 01-19-2023                          TIME: 11:41:38

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 2. 5-Year                     **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
```

```
  --------------------
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.65  5.67  21.06 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.02  5.33  21.32 0.39   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.04  5.25  21.23 0.39   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.06  5.25  53.33 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.06  5.25  21.25  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.68  5.58  21.07  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.70  5.58  22.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.14  5.25  49.17 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.66  5.67  49.16  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.09  5.25  49.36 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.63  5.67  49.35  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.25  5.25  49.55 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.72  5.75  49.54  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    2.20  5.25  48.60 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.26  5.75  48.60  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.16  5.25  49.55 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.67  5.75  49.54  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.12  5.25  49.36 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.65  5.67  49.35  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.61  5.25  48.60 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.35  5.58  48.59  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.13  5.50  21.06 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.04  5.33  26.54 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.78  5.58  43.20  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.81  5.58  42.57  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.06  5.25  49.54 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.83  5.58  42.83  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.02  5.25  26.50 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.07  5.25  39.01 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.73  5.75  48.99  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.76  5.67  48.36  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.08  5.33  32.71 0.60   0.000
    [I%=24.0:S%= 2.00]
*
```

```
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.69  5.58  47.63  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.11  5.25  49.16 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.11  5.25  49.54 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.53  5.58  44.92  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.60  5.50  45.08  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    1.69  5.42  45.25  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    2.43  5.50  46.23  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.06  5.25  30.23 0.56   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.29  5.75  47.92  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.06  5.25  48.78 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.11  5.25  49.54 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.17  5.25  49.29  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    2.56  5.42  46.35  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    3.79  5.58  46.89  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    4.45  5.58  47.27  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    4.45  5.58  47.27  n/a   0.000
       Outflow           0002  2  5.0   64.65    2.22  5.58  47.27  n/a   0.000
       Outflow           0002  3  5.0   64.65    2.22  5.58  47.27  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.22  5.25  37.42 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.25  5.25  48.60 0.89   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.15  5.50  48.57  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.10  5.25  48.78 0.90   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.32  5.25  40.40  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.63  5.25  45.42  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.76  5.25  46.05  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    2.88  5.50  46.99  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.67  9.25  45.89  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.02  5.25  36.46 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.21  5.25  37.42 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.79  5.33  47.02  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    2.98  5.58  47.21  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    2.99  5.58  47.16  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    0.83  9.00  46.49  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.19  5.25  37.42 0.69   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.05  5.25  36.47 0.67   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.69  9.25  45.50  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.69  9.25  45.50  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    1.51  9.08  45.99  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    1.51  9.08  45.99  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    1.52  9.08  45.94  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.03  5.33  21.05 0.39   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.03  5.25  35.77 0.66   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    1.52  9.08  45.80  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    1.52  9.08  45.75  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 54.38 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\e015dfbf-0e61-4e9d-828b-d2
```

```
    remark: 5 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.29  5.42  26.55 0.49   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\d1472f54-e05b-4e33-a2cf-c8bbcafa829a\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\d1472f54-e05b-4e33-a2cf-c8bbcafa829a\sce


DATE: 01-19-2023                          TIME: 11:41:39

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 3. 10-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    0.84  5.67  27.10 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.02  5.33  27.08 0.43   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.06  5.25  26.98 0.43   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.07  5.25  61.66 0.98   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.08  5.25  27.01  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    0.89  5.58  27.09  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    0.91  5.58  28.09  n/a   0.000
*
```

```
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.33  5.25  57.33 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.77  5.67  57.32  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.28  5.25  57.53 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.74  5.67  57.53  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.48  5.25  57.74 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    0.84  5.67  57.73  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    2.60  5.25  56.72 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.48  5.75  56.71  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.37  5.25  57.74 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.78  5.67  57.73  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.31  5.25  57.53 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.76  5.58  57.53  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.71  5.25  56.72 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.41  5.58  56.70  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.16  5.50  27.09 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.05  5.33  33.49 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    0.93  5.58  50.91  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    0.96  5.58  50.26  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.07  5.25  57.73 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    0.99  5.50  50.53  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  5.25  33.44 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.09  5.25  46.49 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    0.85  5.67  57.15  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    0.89  5.58  56.47  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.10  5.33  39.63 0.63   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.82  5.58  55.67  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.13  5.25  57.32 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.13  5.25  57.73 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    1.81  5.58  52.77  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    1.90  5.50  52.94  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.01  5.42  53.12  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    2.89  5.42  54.18  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.07  5.25  36.90 0.59   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.52  5.67  55.98  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.07  5.25  56.91 0.91   0.000
```

```
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.13  5.25  57.73 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.20  5.25  57.46  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    3.05  5.42  54.30  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    4.51  5.50  54.88  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    5.27  5.50  55.30  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    5.27  5.50  55.30  n/a   0.000
       Outflow           0002  2  5.0   64.65    2.64  5.50  55.30  n/a   0.000
       Outflow           0002  3  5.0   64.65    2.64  5.50  55.30  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.26  5.25  44.42 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.29  5.25  56.71 0.90   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.17  5.50  56.69  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.12  5.25  56.91 0.91   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.38  5.25  47.70  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.75  5.25  53.22  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    0.91  5.25  53.91  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    3.43  5.42  54.97  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    0.92  8.92  53.85  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.02  5.25  43.60 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.25  5.25  44.42 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    0.93  5.33  54.96  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    3.54  5.50  55.21  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    3.55  5.50  55.16  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.07  8.75  54.48  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
```

```
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.23  5.25  44.42 0.71   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.06  5.25  43.61 0.70   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    0.93  8.83  53.43  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    0.93  8.83  53.43  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    2.00  8.83  53.95  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    2.00  8.83  53.95  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    2.00  8.83  53.89  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.04  5.33  27.09 0.43   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.04  5.25  42.89 0.68   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    2.00  8.75  53.74  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    2.01  8.75  53.68  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 62.71 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\1c21b051-4f4c-4882-838d-65
    remark: 10 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.36  5.42  33.50 0.53   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
 FINISH

================================================================================================================

================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                 *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\b3e12f14-9657-46eb-8967-439ef143ad49\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\b3e12f14-9657-46eb-8967-439ef143ad49\sce


DATE: 01-19-2023                          TIME: 11:41:38

USER:


COMMENTS: _____________________________________________________________
```

```
  ***********************************************
  ** SIMULATION : 4. 25-Year                   **
  ***********************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.10  5.67  35.07 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.03  5.25  34.71 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.07  5.25  34.59 0.47   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.09  5.25  72.05 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.10  5.25  34.63  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.16  5.58  35.04  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.18  5.58  36.11  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.59  5.25  67.55 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    0.92  5.58  67.54  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.52  5.25  67.77 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.88  5.58  67.76  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.76  5.25  67.99 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.00  5.67  67.98  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0210  1  5.0   36.60    3.13  5.25  66.89 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.77  5.67  66.88  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.63  5.25  67.99 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    0.93  5.67  67.98  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.57  5.25  67.77 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    0.91  5.58  67.76  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.85  5.25  66.89 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.49  5.50  66.87  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.21  5.42  35.06 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.06  5.33  42.48 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.13  5.58  60.65  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.18  5.50  59.97  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.08  5.25  67.98 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.21  5.50  60.26  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.03  5.25  42.41 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.11  5.25  56.01 0.77   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.02  5.67  67.37  n/a   0.000
*
```

```
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.07  5.58  66.65  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.12  5.25  48.54 0.66   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    0.98  5.50  65.77  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.15  5.25  67.54 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.16  5.25  67.98 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.20  5.50  62.67  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.29  5.50  62.85  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.41  5.42  63.04  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    3.46  5.42  64.18  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.09  5.25  45.53 0.62   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    1.82  5.67  66.10  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.08  5.25  67.10 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.16  5.25  67.98 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.24  5.25  67.69  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    3.66  5.33  64.31  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    5.41  5.50  64.93  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    6.32  5.50  65.37  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    6.32  5.50  65.37  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.16  5.50  65.37  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.16  5.50  65.37  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.32  5.25  53.38 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.35  5.25  66.89 0.91   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.20  5.42  66.86  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.14  5.25  67.10 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.46  5.25  56.98  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    0.91  5.25  63.05  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.11  5.25  63.80  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    4.13  5.33  65.00  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.20  8.67  63.87  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.03  5.25  52.73 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.30  5.25  53.38 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.12  5.33  64.95  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    4.25  5.50  65.26  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    4.27  5.42  65.21  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.33  8.58  64.51  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.28  5.25  53.38 0.73   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.07  5.25  52.74 0.72   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.21  8.58  63.39  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.21  8.58  63.39  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    2.55  8.58  63.95  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    2.55  8.58  63.95  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    2.55  8.58  63.88  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.05  5.33  35.06 0.48   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                 15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
```

```
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.05  5.25  52.00 0.71   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    2.56  8.50  63.72  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    2.57  8.50  63.66  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 73.10 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\f230d583-27a3-4fcd-8ff4-6b
    remark: 25 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.46  5.42  42.49 0.58   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\0d18fded-ff0a-4fb9-9682-e6fec2fb8e44\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\0d18fded-ff0a-4fb9-9682-e6fec2fb8e44\sce


DATE: 01-19-2023                          TIME: 11:41:37

USER:


COMMENTS: _____________________________________________________


  ************************************************
  ** SIMULATION : 5. 50-Year                    **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.30  5.58  41.24 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.04  5.25  40.63 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.08  5.25  40.51 0.50   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.09  5.25  79.77 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.12  5.25  40.55  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.37  5.58  41.20  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.40  5.58  42.31  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.78  5.25  75.16 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    1.03  5.58  75.16  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.70  5.25  75.39 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    0.99  5.58  75.39  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    1.97  5.25  75.62 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.12  5.67  75.62  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    3.49  5.25  74.47 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    1.98  5.67  74.47  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    1.83  5.25  75.62 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    1.05  5.67  75.62  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.75  5.25  75.39 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    1.01  5.50  75.39  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    0.95  5.25  74.47 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.55  5.50  74.46  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
```

```
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.25  5.42  41.24 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  5.33  49.33 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.27  5.58  67.96  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.33  5.50  67.26  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.09  5.25  75.62 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.37  5.50  67.57  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.04  5.25  49.25 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.12  5.25  63.18 0.78   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.14  5.58  74.98  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.20  5.50  74.23  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.14  5.25  55.31 0.68   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    1.10  5.50  73.31  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.17  5.25  75.16 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.18  5.25  75.62 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.47  5.50  70.07  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.57  5.42  70.26  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    2.71  5.33  70.46  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    3.89  5.42  71.66  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.10  5.25  52.12 0.64   0.000
```

```
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    2.03  5.58  73.65  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.09  5.25  74.70 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.18  5.25  75.62 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.27  5.25  75.31  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    4.11  5.33  71.79  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    6.06  5.42  72.43  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    7.09  5.50  72.89  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    7.09  5.50  72.89  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.54  5.50  72.89  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.54  5.50  72.89  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.36  5.25  60.17 0.74   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.39  5.25  74.47 0.92   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.23  5.42  74.44  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.16  5.25  74.70 0.92   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.52  5.25  63.98  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    1.02  5.25  70.41  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.24  5.25  71.21  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    4.64  5.33  72.50  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.39  8.58  71.35  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.03  5.25  59.64 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.34  5.25  60.17 0.74   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.27  5.25  72.41  n/a   0.000
```

```
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    4.75  5.42  72.77  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    4.77  5.42  72.71  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.60  8.42  72.01  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.32  5.25  60.17 0.74   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.08  5.25  59.65 0.74   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.42  8.25  70.84  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.42  8.25  70.84  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    3.01  8.42  71.42  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    3.01  8.42  71.42  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    3.02  8.25  71.35  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.06  5.33  41.23 0.51   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.06  5.25  58.91 0.73   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    3.03  8.25  71.19  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    3.04  8.25  71.12  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 80.82 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\4e1b3750-c84e-4b6e-a3e3-84
    remark: 50 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.53  5.42  49.34 0.61   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
================================================================================================================


       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                  *****  S U M M A R Y   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\c4ed3c74-506b-44cb-9af5-792eb76017bb\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\c4ed3c74-506b-44cb-9af5-792eb76017bb\sce
```

12-Hour AES Storms

DATE: 01-19-2023 TIME: 11:41:39

USER:

COMMENTS: _____

```
  ************************************************
  ** SIMULATION : 6. 100-Year                   **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                  min     ha   '  cms   hrs     mm          cms

     START @  0.00 hrs
     --------------------
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0200  1  5.0   29.10    1.51  5.58  47.59 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.04  5.25  46.74 0.53   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.10  5.25  46.61 0.53   0.000
    [CN=79.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.10  5.25  87.49 0.99   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.14  5.25  46.65  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    1.59  5.58  47.53  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    1.62  5.58  48.69  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    1.96  5.25  82.79 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0011  1  5.0   18.20    1.14  5.58  82.79  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    1.87  5.25  83.03 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0015  1  5.0   17.30    1.09  5.58  83.03  n/a   0.000
*
    READ STORM                 15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    2.17  5.25  83.27 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0024  1  5.0   20.20    1.24  5.58  83.27  n/a   0.000
```

```
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    3.87  5.25  82.07 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0031  1  5.0   36.60    2.20  5.67  82.07  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    2.02  5.25  83.27 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0036  1  5.0   18.80    1.15  5.58  83.27  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    1.92  5.25  83.03 0.94   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0039  1  5.0   17.70    1.12  5.50  83.03  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.05  5.25  82.07 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0043  1  5.0    9.68    0.61  5.50  82.06  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.29  5.42  47.59 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.07  5.33  56.30 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.33]
*
    ADD [  0011+  0004]  0013  3  5.0   23.10    1.42  5.58  75.32  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    1.48  5.50  74.61  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.10  5.25  83.27 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    1.53  5.50  74.92  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.05  5.25  56.21 0.63   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
```

```
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.14  5.25  70.42 0.80   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0024+  0006]  0025  3  5.0   20.70    1.26  5.58  82.61  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    1.33  5.50  81.84  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.16  5.25  62.19 0.70   0.000
    [I%=24.0:S%= 2.00]
*
    ADD [  0015+  0032]  0020  3  5.0   19.30    1.22  5.50  80.87  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.18  5.25  82.79 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.20  5.25  83.27 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    2.74  5.50  77.52  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    2.86  5.42  77.71  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    3.01  5.33  77.92  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    4.32  5.42  79.16  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.12  5.25  58.84 0.66   0.000
    [I%=18.0:S%= 2.00]
*
    ADD [  0003+  0031]  0033  3  5.0   38.00    2.26  5.58  81.22  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.10  5.25  82.31 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.20  5.25  83.27 0.94   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0209+  0211]  0041  3  5.0    2.70    0.29  5.25  82.95  n/a   0.000
*
    ADD [  0041+  0028]  0041  1  5.0   72.50    4.57  5.33  79.30  n/a   0.000
*
    ADD [  0041+  0033]  0041  3  5.0  110.50    6.73  5.42  79.96  n/a   0.000
*
    ADD [  0041+  0036]  0041  1  5.0  129.30    7.86  5.50  80.44  n/a   0.000
*
    DIVERT HYD           0069  1  5.0  129.30    7.86  5.50  80.44  n/a   0.000
       Outflow           0002  2  5.0   64.65    3.93  5.50  80.44  n/a   0.000
       Outflow           0002  3  5.0   64.65    3.93  5.50  80.44  n/a   0.000
       Outflow           0002  4  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  5  5.0    0.00    0.00  0.00   0.00  n/a   0.000
       Outflow           0002  6  5.0    0.00    0.00  0.00   0.00  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.40  5.25  67.04 0.76   0.000
    [I%=50.0:S%= 2.00]
```

```
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.43  5.25  82.07 0.93   0.000
    [I%=71.0:S%= 2.00]
*
 ** Reservoir
    OUTFLOW:             0062  1  5.0    3.90    0.25  5.42  82.04  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.17  5.25  82.31 0.93   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0216+  0217]  0047  3  5.0    6.10    0.58  5.25  71.05  n/a   0.000
*
    ADD [  0047+  0043]  0047  1  5.0   15.78    1.14  5.25  77.80  n/a   0.000
*
    ADD [  0047+  0062]  0047  3  5.0   19.68    1.38  5.25  78.65  n/a   0.000
*
    ADD [  0047+  0069]  0047  1  5.0   84.33    5.16  5.25  80.02  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0050  1  5.0   84.33    1.62  8.42  78.86  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.04  5.25  66.64 0.75   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.38  5.25  67.04 0.76   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0039]  0065  3  5.0   22.00    1.41  5.25  79.90  n/a   0.000
*
    ADD [  0065+  0069]  0065  1  5.0   86.65    5.28  5.42  80.30  n/a   0.000
*
    ADD [  0065+  0008]  0065  3  5.0   87.05    5.30  5.42  80.24  n/a   0.000
*
 ** Reservoir
    OUTFLOW:             0067  1  5.0   87.05    1.88  8.25  79.53  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.36  5.25  67.04 0.76   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.09  5.25  66.65 0.75   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0218+  0050]  0060  3  5.0   88.33    1.65  8.25  78.33  n/a   0.000
*
    ADD [  0060+  0051]  0060  1  5.0   88.33    1.65  8.25  78.33  n/a   0.000
*
    ADD [  0060+  0067]  0060  3  5.0  175.38    3.53  8.25  78.93  n/a   0.000
*
    ADD [  0060+  0068]  0060  1  5.0  175.38    3.53  8.25  78.93  n/a   0.000
*
    ADD [  0060+  0088]  0060  3  5.0  176.38    3.54  8.25  78.86  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.07  5.33  47.58 0.54   0.000
    [CN=82.0         ]
    [ N = 3.0:Tp 0.33]
```

```
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.06  5.25  65.90 0.74   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38    3.55  8.25  78.68  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28    3.56  8.25  78.62  n/a   0.000
*
    READ STORM                15.0
    [ Ptot= 88.54 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\94060706-def6-4c61-9985-b5495e181abd\0eea4a93-9cad-4b4c-84ee-cc
    remark: 100 Year 12 Hour AES (Bloor, TRCA)
*
 *  CALIB NASHYD         0220  1  5.0    8.00    0.60  5.33  56.31 0.64   0.000
    [CN=88.0         ]
    [ N = 3.0:Tp 0.44]
*
```

```
       V    V   I    SSSSS  U   U    A    L             (v 6.1.2003)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```
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***** S U M M A R Y O U T P U T *****

```
  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\e5439348-e1a8-456f-a51f-551358ae5551\sce
  Summary filename: C:\Users\icleroux\AppData\Local\Civica\VH5\65307dd7-d2c9-4477-bbe6-c94a7eb98be6\e5439348-e1a8-456f-a51f-551358ae5551\sce


DATE: 01-19-2023                          TIME: 11:42:46

USER:


COMMENTS: _____________________________________________________________


  ************************************************
  ** SIMULATION : Regional                      **
  ************************************************

  W/E COMMAND             HYD ID   DT    AREA  ' Qpeak Tpeak   R.V. R.C.   Qbase
                                   min     ha   '  cms   hrs     mm          cms

      START @  0.00 hrs
      --------------------
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 ** CALIB NASHYD         0200  1  5.0   29.10    3.42 10.50 181.63 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 0.66]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 ** CALIB NASHYD         0001  1  5.0    0.60    0.08 10.00 182.77 0.86   0.000
    [CN=90.0         ]
    [ N = 3.0:Tp 0.29]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 ** CALIB NASHYD         0002  1  5.0    1.30    0.19 10.00 182.47 0.86   0.000
    [CN=90.0         ]
    [ N = 3.0:Tp 0.21]
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0201  1  5.0    0.92    0.14 10.00 210.97 1.00   0.000
    [I%=99.0:S%= 2.00]
*
    ADD [  0001+  0002]  0010  3  5.0    1.90    0.27 10.00 182.56  n/a   0.000
*
    ADD [  0010+  0200]  0010  1  5.0   31.00    3.63 10.50 181.69  n/a   0.000
*
    ADD [  0010+  0201]  0010  3  5.0   31.92    3.72 10.50 182.53  n/a   0.000
*
    READ STORM                 60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB NASHYD         0004  1  5.0    4.90    0.62 10.25 181.62 0.86   0.000
```

```
    [CN=91.0         ]
    [ N = 3.0:Tp 0.50]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB NASHYD         0005  1  5.0    0.90    0.13 10.08 188.93 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0202  1  5.0   18.20    2.64 10.00 208.72 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0202+  0004]  0013  3  5.0   23.10    3.23 10.00 202.98  n/a   0.000
*
    ADD [  0013+  0005]  0013  1  5.0   24.00    3.35 10.00 202.45  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0203  1  5.0    0.90    0.13 10.00 208.98 0.99   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0013+  0203]  0014  3  5.0   24.90    3.48 10.00 202.69  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB NASHYD         0006  1  5.0    0.50    0.07 10.00 188.62 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.20]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0007  1  5.0    1.40    0.20 10.00 200.56 0.95   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0206  1  5.0   20.20    2.91 10.00 208.98 0.99   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0206+  0006]  0025  3  5.0   20.70    2.98 10.00 208.49  n/a   0.000
*
    ADD [  0025+  0007]  0025  1  5.0   22.10    3.19 10.00 207.99  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0032  1  5.0    2.00    0.28 10.00 195.19 0.92   0.000
    [I%=24.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0205  1  5.0   17.30    2.51 10.00 208.72 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0205+  0032]  0020  3  5.0   19.30    2.79 10.00 207.32  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0204  1  5.0    1.70    0.25 10.00 208.72 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
```

```
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0207  1  5.0    1.80    0.26 10.00 208.98 0.99   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0014+  0020]  0028  3  5.0   44.20    6.28 10.00 204.71  n/a   0.000
*
    ADD [  0028+  0204]  0028  1  5.0   45.90    6.53 10.00 204.86  n/a   0.000
*
    ADD [  0028+  0207]  0028  3  5.0   47.70    6.79 10.00 205.01  n/a   0.000
*
    ADD [  0028+  0025]  0028  1  5.0   69.80    9.97 10.00 205.96  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0003  1  5.0    1.40    0.20 10.00 192.04 0.91   0.000
    [I%=18.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0210  1  5.0   36.60    5.26 10.00 208.20 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0210+  0003]  0033  3  5.0   38.00    5.46 10.00 207.60  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0208  1  5.0   18.80    2.71 10.00 208.98 0.99   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0211  1  5.0    0.90    0.13 10.00 208.46 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0209  1  5.0    1.80    0.26 10.00 208.98 0.99   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0208+  0209]  0041  3  5.0   20.60    2.97 10.00 208.98  n/a   0.000
*
    ADD [  0041+  0211]  0041  1  5.0   21.50    3.10 10.00 208.96  n/a   0.000
*
    ADD [  0041+  0028]  0041  3  5.0   91.30   13.07 10.00 206.66  n/a   0.000
*
    ADD [  0041+  0033]  0041  1  5.0  129.30   18.53 10.00 206.94  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0212  1  5.0   17.70    2.58 10.00 208.72 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0214  1  5.0    9.68    1.41 10.00 208.20 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0216  1  5.0    1.60    0.23 10.00 208.46 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    READ STORM                60.0
```

```
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0215  1  5.0    3.90    0.57 10.00 208.20 0.98   0.000
    [I%=71.0:S%= 2.00]
*
    ADD [  0212+  0214]  0047  3  5.0   27.38    4.00 10.00 208.54  n/a   0.000
*
    ADD [  0047+  0215]  0047  1  5.0   31.28    4.57 10.00 208.50  n/a   0.000
*
    ADD [  0047+  0216]  0047  3  5.0   32.88    4.80 10.00 208.49  n/a   0.000
*
    ADD [  0047+  0041]  0047  1  5.0  162.18   23.34 10.00 207.25  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0217  1  5.0    4.50    0.65 10.00 196.35 0.93   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0008  1  5.0    0.40    0.06 10.00 198.29 0.94   0.000
    [I%=37.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0213  1  5.0    4.30    0.61 10.00 196.35 0.93   0.000
    [I%=50.0:S%= 2.00]
*
    ADD [  0213+  0008]  0065  3  5.0    4.70    0.67 10.00 196.52  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0218  1  5.0    4.00    0.57 10.00 196.35 0.93   0.000
    [I%=50.0:S%= 2.00]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0088  1  5.0    1.00    0.15 10.00 198.30 0.94   0.000
    [I%=37.0:S%= 2.00]
*
    ADD [  0217+  0218]  0060  3  5.0    8.50    1.22 10.00 196.35  n/a   0.000
*
    ADD [  0060+  0047]  0060  1  5.0  170.68   24.56 10.00 206.71  n/a   0.000
*
    ADD [  0060+  0065]  0060  3  5.0  175.38   25.23 10.00 206.44  n/a   0.000
*
    ADD [  0060+  0088]  0060  1  5.0  176.38   25.37 10.00 206.39  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB NASHYD         0219  1  5.0    1.00    0.14 10.08 181.58 0.86   0.000
    [CN=91.0         ]
    [ N = 3.0:Tp 0.33]
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
*
 *  CALIB STANDHYD       0009  1  5.0    0.90    0.11 10.00 197.18 0.93   0.000
    [I%=34.0:S%= 2.00]
*
    ADD [  0219+  0060]  0052  3  5.0  177.38   25.51 10.00 206.25  n/a   0.000
*
    ADD [  0052+  0009]  0052  1  5.0  178.28   25.62 10.00 206.21  n/a   0.000
*
    READ STORM                60.0
    [ Ptot=212.00 mm ]
    fname : C:\Users\icleroux\AppData\Local\Temp\abb80b69-665d-464e-899e-44a3cfc672e7\8017923c-bc27-4696-a327-a0
    remark: Hazel
```

```
                                                                    Regional Storm
*
 *  CALIB NASHYD         0220  1  5.0    8.00    1.06 10.17 188.96 0.89   0.000
    [CN=94.0         ]
    [ N = 3.0:Tp 0.44]
*
 FINISH

================================================================================================================
```

Summary of Post-Development Peak Flow VO Results

Post-Development Peak Runoff Directed to the West Tributary (6-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)						
	200	201	Total Site	EXT1	EXT2	Total External	Total[1]
2-year	0.370	0.085	**0.455**	0.013	0.034	**0.047**	**0.404**
5-year	0.672	0.112	**0.784**	0.023	0.057	**0.080**	**0.726**
10-year	0.901	0.131	**1.032**	0.030	0.075	**0.105**	**0.970**
25-year	1.210	0.154	**1.364**	0.040	0.099	**0.139**	**1.303**
50-year	1.453	0.172	**1.625**	0.047	0.117	**0.164**	**1.567**
100-year	1.705	0.189	**1.894**	0.055	0.136	**0.191**	**1.836**
Regional	3.417	0.135	**3.552**	0.084	0.185	**0.269**	**3.723**

1. Total internal and external flows directed to the west tributary.

Post-Development Peak Runoff Directed to the West Tributary (12-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)						
	200	201	Total Site	EXT1	EXT2	Total External	Total[1]
2-year	0.383	0.049	**0.432**	0.012	0.028	**0.040**	**0.418**
5-year	0.646	0.064	**0.710**	0.019	0.044	**0.063**	**0.698**
10-year	0.841	0.074	**0.915**	0.024	0.056	**0.080**	**0.907**
25-year	1.099	0.086	**1.185**	0.031	0.071	**0.102**	**1.184**
50-year	1.299	0.095	**1.394**	0.036	0.083	**0.119**	**1.397**
100-year	1.506	0.104	**1.610**	0.041	0.095	**0.136**	**1.617**

1. Total internal and external flows directed to the west tributary.

Site Post-Development Peak Uncontrolled Runoff to the Flow Splitter (6-Hour Storm)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)										
	202	203	204	205	206	207	208	209	210	211	Total
2-year	1.267	0.074	0.126	1.226	1.372	0.134	1.274	0.131	2.414	0.070	**8.088**
5-year	1.775	0.101	0.175	1.748	1.940	0.186	1.801	0.185	3.415	0.097	**11.423**
10-year	2.164	0.121	0.212	2.084	2.322	0.225	2.156	0.224	4.096	0.115	**13.719**
25-year	2.611	0.144	0.254	2.548	2.808	0.270	2.608	0.269	4.965	0.138	**16.615**
50-year	2.991	0.161	0.287	2.874	3.236	0.305	3.006	0.303	5.736	0.156	**19.055**
100-year	3.329	0.178	0.319	3.196	3.605	0.338	3.349	0.337	6.399	0.173	**21.223**

Note: Regional flows are conveyed overland (major overland) and are therefore not directed to the flow splitter

Site Post-Development Peak Uncontrolled Runoff into the Flow Splitter (12-Hour Storm)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)										
	202	**203**	**204**	**205**	**206**	**207**	**208**	**209**	**210**	**211**	**Total**
2-year	0.840	0.045	0.081	0.811	0.928	0.086	0.863	0.086	1.636	0.043	**5.419**
5-year	1.138	0.059	0.108	1.091	1.245	0.115	1.157	0.115	2.202	0.058	**7.288**
10-year	1.332	0.069	0.126	1.276	1.475	0.134	1.371	0.134	2.600	0.068	**8.585**
25-year	1.594	0.082	0.151	1.525	1.757	0.160	1.633	0.160	3.125	0.080	**10.267**
50-year	1.776	0.091	0.168	1.698	1.967	0.178	1.829	0.178	3.489	0.089	**11.463**
100-year	1.958	0.100	0.185	1.871	2.169	0.196	2.017	0.196	3.872	0.098	**12.662**

External Post-Development Peak Uncontrolled Runoff to the Flow Splitter (6-Hour Storm)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)							
	EXT3A	**EXT3B**	**EXT4**	**EXT5**	**EXT6**	**EXT7**	**Total External**	**Total[1]**
2-year	0.049	0.067	0.073	0.023	0.017	0.081	**0.310**	**8.294**
5-year	0.078	0.107	0.133	0.041	0.029	0.118	**0.506**	**11.859**
10-year	0.106	0.135	0.178	0.054	0.038	0.145	**0.656**	**14.287**
25-year	0.137	0.181	0.240	0.071	0.050	0.179	**0.858**	**17.370**
50-year	0.160	0.212	0.289	0.084	0.059	0.205	**1.009**	**19.945**
100-year	0.185	0.243	0.339	0.098	0.068	0.238	**1.171**	**22.260**

Note: Regional flows are conveyed overland (major overland) and are therefore not directed to the flow splitter

1. Total internal and external flows directed to the flow splitter.

External Post-Development Peak Uncontrolled Runoff to the Flow Splitter (12-Hour Storm)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)							
	EXT3A	**EXT3B**	**EXT4**	**EXT5**	**EXT6**	**EXT7**	**Total External**	**Total[1]**
2-year	0.038	0.052	0.075	0.023	0.014	0.054	**0.256**	**5.662**
5-year	0.058	0.079	0.127	0.036	0.022	0.075	**0.397**	**7.668**
10-year	0.071	0.098	0.164	0.045	0.028	0.091	**0.497**	**9.065**
25-year	0.089	0.124	0.214	0.057	0.035	0.110	**0.629**	**10.875**
50-year	0.103	0.143	0.253	0.066	0.040	0.124	**0.729**	**12.169**
100-year	0.118	0.162	0.292	0.075	0.045	0.138	**0.830**	**13.469**

1. Total internal and external flows directed to the flow splitter.

Post-Development Peak Runoff to Wetland 1 (6-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)					
	Flow Splitter[1]	EXT8A	212	213	Total Site[2]	Total[3]
2-year	4.15	0.010	1.277	0.223	**1.500**	**5.667**
5-year	5.93	0.017	1.813	0.317	**2.130**	**8.092**
10-year	7.14	0.022	2.192	0.393	**2.585**	**9.767**
25-year	8.68	0.030	2.637	0.482	**3.119**	**11.852**
50-year	9.97	0.036	2.972	0.551	**3.523**	**13.552**
100-year	11.13	0.042	3.303	0.622	**3.925**	**15.119**
Regional[4]	-	0.058	-	0.613	**0.613**	**0.671**

Note: Regional flows are conveyed overland (major overland) and are therefore not directed to the flow splitter

1. Half of total internal and external flows directed to the flow splitter.
2. Catchment 213 + Catchment 214
3. Total internal and external flows directed to Wetland 1.
4. Only flows from Catchment EXT8A and 213 (Wetland 1 area) are directed to Wetland 1 during the Regional event (all major overland flow directed to Wetland 2).

Post-Development Peak Runoff to Wetland 1 (12-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)					
	Flow Splitter[1]	EXT8A	212	213	Total Site[2]	Total[3]
2-year	2.83	0.014	0.836	0.147	**0.983**	**3.829**
5-year	3.83	0.020	1.123	0.206	**1.329**	**5.183**
10-year	4.53	0.024	1.313	0.246	**1.559**	**6.116**
25-year	5.44	0.030	1.567	0.298	**1.865**	**7.332**
50-year	6.08	0.033	1.747	0.342	**2.089**	**8.206**
100-year	6.73	0.037	1.924	0.382	**2.306**	**9.078**

1. Half of total internal and external flows directed to the flow splitter.
2. Catchment 213 + Catchment 214
3. Total internal and external flows directed to Wetland 1.

Post-Development Peak Runoff to Wetland 2 (6-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)						
	Flow Splitter[1]	214	215	216	217	Total Site	Total[2]
2-year	4.15	0.712	0.311	0.123	0.240	**1.386**	**5.533**
5-year	5.93	1.004	0.427	0.171	0.347	**1.949**	**7.878**
10-year	7.14	1.196	0.505	0.203	0.419	**2.323**	**9.467**
25-year	8.68	1.439	0.610	0.243	0.514	**2.806**	**11.492**
50-year	9.97	1.623	0.685	0.275	0.603	**3.186**	**13.158**
100-year	11.13	1.804	0.759	0.305	0.680	**3.548**	**14.679**

1. Half of total internal and external flows directed to the flow splitter.
2. Total internal and external flows directed to Wetland 2.

Post-Development Peak Runoff to Wetland 2 (12-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)						
	Flow Splitter[1]	214	215	216	217	Total Site	Total[2]
2-year	2.83	0.456	0.189	0.077	0.156	**0.878**	**3.708**
5-year	3.83	0.608	0.251	0.103	0.218	**1.180**	**5.014**
10-year	4.53	0.713	0.293	0.120	0.264	**1.390**	**5.922**
25-year	5.44	0.852	0.348	0.143	0.319	**1.662**	**7.099**
50-year	6.08	0.948	0.387	0.159	0.361	**1.855**	**7.940**
100-year	6.73	1.045	0.426	0.175	0.404	**2.050**	**8.784**

1. Half of total internal and external flows directed to the flow splitter.
2. Total internal and external flows directed to Wetland 2.

Post-Development Peak Runoff to Wetland 2 (Regional)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)								
	202	203	204	205	206	207	208	209	Total[1]
Regional	2.639	0.132	0.248	2.514	2.909	0.263	2.706	0.263	**23.896**
	210	**211**	**212**	**214**	**215**	**216**	**217**		
	5.259	0.132	2.582	1.415	0.573	0.235	0.647		

Note: Regional flows are conveyed overland (major overland) towards Wetland 2

1. Total internal and external flows directed to Wetland 2 during the Regional event (no flow splitter).

Post-Development Peak Runoff Directed to the East Tributary (6-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)				
	218	219	EXT8B	EXT9	Total[1]
2-year	0.210	0.019	0.051	0.030	**11.505**
5-year	0.296	0.034	0.078	0.043	**16.414**
10-year	0.367	0.046	0.095	0.053	**19.787**
25-year	0.450	0.063	0.119	0.067	**24.032**
50-year	0.514	0.076	0.136	0.078	**27.503**
100-year	0.596	0.089	0.154	0.091	**30.715**
Regional	0.571	0.138	0.145	0.112	**25.622**

1. Total internal and external flows directed to the east tributary, including uncontrolled flows directed to each wetland.

Post-Development Peak Runoff Directed to the East Tributary (12-Hour)

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)				
	218	219	EXT8B	EXT9	Total[1]
2-year	0.137	0.019	0.035	0.021	**7.748**
5-year	0.192	0.031	0.050	0.031	**10.499**
10-year	0.229	0.040	0.060	0.038	**12.403**
25-year	0.278	0.052	0.073	0.048	**14.881**
50-year	0.318	0.061	0.083	0.056	**16.663**
100-year	0.356	0.070	0.093	0.063	**18.444**

1. Total internal and external flows directed to the east tributary, including uncontrolled flows directed to each wetland.

Post-Development Peak Runoff Directed to Salt Creek

Design Storm Event	Post-Development Uncontrolled Flow Rate (m^3/s)	
	220 (6-Hour)	220 (12-Hour)
2-year	0.174	0.178
5-year	0.308	0.285
10-year	0.405	0.361
25-year	0.532	0.458
50-year	0.631	0.531
100-year	0.732	0.604
Regional	1.062	

STORM SEWER DESIGN SHEET: (5 Year Storm)

Tullamore, Town of Caledon

CROZIER CONSULTING ENGINEERS

Project #: 2022-5842
Date: 6-Apr-23
Designed: AS
Checked: JS/ADF

Min. Diameter = 300 mm
Mannings 'n'= 0.013
Starting Tc = 10 min
Factor of Safety = 10 %

Rainfall Intensity = $\frac{A}{(Tc+B)^{c}}$ *where Tc is in minutes*

A = 1593
B = 11
C = 0.8789
(5 Yr)

NOMINAL PIPE SIZE USED

DESCRIPTION	FROM MH	TO MH	AREA (ha)	RUNOFF COEFFICIENT "R"	'AR'	ACCUM. 'AR'	RAINFALL INTENSITY (mm/hr)	FLOW (m3/s)	CONSTANT FLOW (m3/s)	ACCUM. CONSTANT FLOW (m3/s)	TOTAL FLOW (m3/s)	LENGTH (m)	SLOPE (%)	PIPE DIAMETER (mm)	FULL FLOW CAPACITY (m3/s)	FULL FLOW VELOCITY (m/s)	INITIAL Tc (min)	TIME OF CONCENTRATION (min)	ACC. TIME OF CONCENTRATION (min)	PERCENT FULL (%)
STREET C																				
	MH1	MH2	0.39	0.90	0.35	0.35	109.7	0.107			0.107	54.9	1.00	375	0.175	1.59	10.00	0.58	10.58	61%
	MH2	MH3	0.16	0.90	0.14	0.50	107.1	0.147			0.147	55.1	1.00	375	0.175	1.59	10.58	0.58	11.15	84%
	MH3	MH4	0.31	0.90	0.28	0.77	104.6	0.225			0.225	118.9	1.00	450	0.285	1.79	11.15	1.11	12.26	79%
	MH4	MH5	0.30	0.90	0.27	1.04	100.3	0.291			0.291	115.6	1.00	525	0.430	1.99	12.26	0.97	13.23	68%
	MH5	MH6	0.31	0.90	0.28	1.32	96.7	0.355			0.355	118.6	1.00	525	0.430	1.99	13.23	0.99	14.23	83%
TO STREET B	MH6	MH7	0.23	0.90	0.21	1.53	93.4	0.397			0.397	102.6	1.00	525	0.430	1.99	14.23	0.86	15.09	92%
STREET A																				
	MH50	MH51	0.28	0.90	0.25	0.25	109.7	0.077			0.077	66.8	0.50	375	0.124	1.12	10.00	0.99	10.99	62%
	MH51	MH52	0.20	0.90	0.18	0.43	105.3	0.126			0.126	76.7	0.50	450	0.202	1.27	10.99	1.01	12.00	63%
	MH52	MH53	0.30	0.90	0.27	0.70	101.2	0.197			0.197	115.8	0.50	525	0.304	1.40	12.00	1.37	13.37	65%
	MH53	MH54	0.20	0.90	0.18	0.88	96.2	0.236			0.236	77.7	0.50	525	0.304	1.40	13.37	0.92	14.30	78%
	MH54	MH55	0.20	0.90	0.18	1.06	93.1	0.275			0.275	77.7	0.50	525	0.304	1.40	14.30	0.92	15.22	90%
	MH55	MH56	0.28	0.90	0.25	1.31	90.2	0.329			0.329	108.3	0.50	600	0.434	1.54	15.22	1.18	16.39	76%
TO STREET B	MH56	MH19	0.26	0.90	0.23	1.55	86.8	0.373			0.373	107.1	0.50	600	0.434	1.54	16.39	1.16	17.56	86%
STREET B																				
	MH8	MH9	0.44	0.90	0.40	0.40	109.7	0.121			0.121	97.1	1.00	375	0.175	1.59	10.00	1.02	11.02	69%
	MH9	MH10	0.31	0.90	0.28	0.68	105.2	0.197			0.197	115.5	1.00	450	0.285	1.79	11.02	1.07	12.09	69%
	MH10	MH11	0.10	0.90	0.09	0.77	100.9	0.214			0.214	38.7	1.00	450	0.285	1.79	12.09	0.36	12.45	75%
EXT4		MH100	4.90	0.25	1.23	1.23														
EXT5		MH100	0.90	0.25	0.23	0.23														
C202 (BLOCK 7)	MH100	MH11				1.45	109.7	0.442	1.211	1.211	1.653	24.3	0.65	975	1.807	2.42	10.00	0.17	10.17	91%
	MH11	MH7	0.07	0.90	0.06	2.28	99.5	0.630		1.211	1.841	28.1	1.00	975	2.241	3.00	12.45	0.16	12.61	82%
Contribution from Street C	MH7	MH12	0.20	0.90	0.18	3.99	90.6	1.004		1.211	2.215	75.6	1.00	1050	2.731	3.15	15.09	0.40	15.49	81%
	MH12	MH13	0.26	0.90	0.23	4.22	89.4	1.049		1.211	2.260	101.7	1.00	1200	3.899	3.45	15.49	0.49	15.98	58%
	MH13	MH14	0.25	0.90	0.23	4.45	88.0	1.087		1.211	2.298	96.4	1.00	1200	3.899	3.45	15.98	0.47	16.44	59%
EXT3B		MH101	2.00	0.51	1.02	1.02														
C205 (BLOCK 8)	MH101	MH14				1.02	109.7	0.311	1.091	1.091	1.402	24.4	1.00	900	1.810	2.85	10.00	0.14	10.14	77%
	MH14	MH15	0.30	0.90	0.27	5.74	86.7	1.382		2.302	3.684	114.7	0.40	1500	4.471	2.53	16.44	0.76	17.20	82%
EXT6		MH102	0.50	0.25	0.13	0.13														
EXT7		MH102	1.40	0.25	0.35	0.35														
C206 (BLOCK 3)	MH102	MH15				0.48	109.7	0.145	1.254	1.254	1.399	21.4	0.50	975	1.585	2.12	10.00	0.17	10.17	88%
	MH15	MH16	0.18	0.90	0.16	6.37	84.6	1.499		3.556	5.055	70.3	1.00	1500	7.069	4.00	17.20	0.29	17.49	72%
	MH16	MH17	0.31	0.90	0.28	6.65	83.9	1.550		3.556	5.106	119.3	1.00	1500	7.069	4.00	17.49	0.50	17.99	72%
	MH17	MH18	0.24	0.90	0.22	6.87	82.6	1.576		3.556	5.132	91.4	1.00	1500	7.069	4.00	17.99	0.38	18.37	73%
C208 (BLOCK 4)	MH103	MH18					109.7		1.154	1.154	1.154	22.1	0.50	975	1.585	2.12	10.00	0.17	10.17	73%
	MH18	MH19	0.06	0.90	0.05	6.92	81.7	1.571		4.710	6.281	24.9	1.00	1500	7.069	4.00	18.37	0.10	18.47	89%
Contribution from Street A	MH19	MH20	0.23	0.90	0.21	8.68	81.4	1.963		4.710	6.673	90.0	0.40	1500x2400 (BOX)	10.460	2.91	18.47	0.52	18.99	64%
EXT3A		MH104	1.40	0.80	1.12	1.12														

C210 (BLOCK 1)	MH104	MH21				1.12	109.7	0.341	2.202	2.202	2.543	20.0	0.50	1200	2.757	2.44	10.00	0.14	10.14	92%
	MH20	MH21	0.32	0.90	0.29	8.97	80.2	1.997		4.710	6.707	121.5	0.40	1500x2400 (BOX)	10.460	2.91	18.99	0.70	19.69	64%
FLOW SPLITTER AT MH22	MH21	MH22	0.24	0.90	0.22	10.30	78.6	2.249		6.912	9.161	71.9	0.40	1500x2400 (BOX)	10.460	2.91	19.69	0.41	20.10	88%
TO WETLAND 1																				
50% FLOW FROM MH 22	MH22	MH29					109.7		4.580	4.580	4.580	16.4	0.40	1500x2400 (BOX)	10.460	2.91	10.00	0.09	10.09	44%
TO EASEMENT	MH29	MH30					109.2			4.580	4.580	117.8	0.40	1500x2400 (BOX)	10.460	2.91	10.09	0.68	10.77	44%
C212 (BLOCK 5)	MH106	MH30					109.7		1.123	1.123	1.123	25.0	0.50	900	1.280	2.01	10.00	0.21	10.21	88%
	MH30	HW1					106.3			5.703	5.703	32.7	0.40	1500x2400 (BOX)	10.460	2.91	10.77	0.19	10.96	55%
TO WETLAND 2																				
C214(BLOCK 2)	MH105	MH23					109.7		0.608	0.608	0.608	20.0	0.50	750	0.787	1.78	10.00	0.19	10.19	77%
50% FLOW FROM MH 22	MH 22	MH23	0.30	0.90	0.27	0.27	109.7	0.082	4.580	4.580	4.663	132.6	0.40	1500x2400 (BOX)	10.460	2.91	10.00	0.76	10.76	45%
	MH23	MH24	0.38	0.90	0.34	0.61	106.3	0.181		5.188	5.369	145.4	0.40	1500x2400 (BOX)	10.460	2.91	10.76	0.83	11.59	51%
215 (BLOCK 6)	MH107	MH25					109.7		0.250	0.250	0.250	12.6	0.50	525	0.304	1.40	10.00	0.15	10.15	82%
	MH24	MH25	0.17	0.90	0.15	0.77	102.8	0.219		5.188	5.407	88.5	0.40	1500x2400 (BOX)	10.460	2.91	11.59	0.51	12.10	52%
	MH25	MH26	0.24	0.90	0.22	0.98	100.9	0.275		5.438	5.713	85.5	0.40	1500x2400 (BOX)	10.460	2.91	12.10	0.49	12.59	55%
	MH26	MH27	0.41	0.90	0.37	1.35	99.0	0.371		5.438	5.810	84.1	0.40	1500x2400 (BOX)	10.460	2.91	12.59	0.48	13.08	56%
	MH27	MH28				1.35	97.3	0.365		5.438	5.803	25.0	0.40	1500x2400 (BOX)	10.460	2.91	13.08	0.14	13.22	55%
	MH28	HW2				1.35	96.8	0.363		5.438	5.801	17.4	0.40	1500x2400 (BOX)	10.460	2.91	13.22	0.10	13.32	55%

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Climatic Water Budget - Thornthwaite Method
Project Name: Tullamore Lands
WOODBRIDGE - Climate Normals 1981-2010 Station Data

	Degrees	Minutes	Seconds	
Insert Latitude:	**43**	**47**	**24**	***Only Applicable Between Latitudes 40° - 50°**

Month	Mean Temperature (◦C)	Heat index	" a "	PET - Potential Evapotranspiration (mm)	Daily Correction Value	Adjusted PET - Potential Evapotranspiration (mm)	Total Precipitation (mm)	Surplus (mm)	Deficit (mm)
January	-6.6	0.0	0.49	0.0	0.77	0.0	51.8	51.8	0.0
February	-4.8	0.0	0.49	0.0	0.87	0.0	47.7	47.7	0.0
March	-0.4	0.0	0.49	0.0	0.99	0.0	49.8	49.8	0.0
April	6.6	1.5	0.52	29.5	1.12	32.9	68.5	35.6	0.0
May	12.9	4.2	0.57	61.5	1.23	74.3	74.3	0.0	0.0
June	18.1	7.0	0.61	89.1	1.29	71.5	71.5	0.0	0.0
July	20.8	8.7	0.64	103.7	1.27	75.7	75.7	0.0	0.0
August	19.6	7.9	0.63	97.2	1.17	78.1	78.1	0.0	0.0
September	15.4	5.5	0.59	74.7	1.05	74.5	74.5	0.0	0.0
October	9.0	2.4	0.54	41.5	0.92	38.1	61.1	23.0	0.0
November	3.1	0.5	0.50	12.9	0.80	10.4	75.1	64.7	0.0
December	-2.8	0.0	0.49	0.0	0.74	0.0	57.9	57.9	0.0
Totals		**37.7**	**1.09**			**455.5**	**786.0**	**330.5**	**0.0**

TOTAL WATER DEFICIT = **0.0 mm**
TOTAL WATER SURPLUS (SURPLUS - DEFICIT) = **330.5 mm**
Precipitation Adjustment Factor : **none**

NOTES:
1. Water budget adjusted for latitude and daylight.
2. (◦C) - Represents calculated mean of daily temperatures for the month.
3. Precipitation and Temperature data from the *TORONTO LESTER B. PEARSON INT'L A (Station No.6158733) Environment Canada Station Data
4. Total Water Surplus (Thornthwaite, 1948) is calculated as total precipitation minus adjusted potential evapostranspiration.

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Pre-Development, Private Blocks 1-8
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	1429960	20000	1449960
Pervious Area (m^2)	1429960	0	1429960
Impervious Area (m^2)	0	20000	20000
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	335
Net Surplus (mm/yr)	331	629	335
Evapotranspiration (mm/yr) *	455	157	451
Infiltration (mm/yr)	132	0	130
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	130
Runoff Pervious Areas (mm/yr)	198	0	196
Runoff Impervious Areas (mm/yr)	0	629	9
Total Runoff (mm/yr)	198	629	204
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	1123949	15720	1139669
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**1123949**	**15720**	**1139669**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	472617	12576	485193
Net Surplus (m^3/yr)	472617	12576	485193
Evapotranspiration (m^3/yr) *	651331	3144	654475
Infiltration (m^3/yr)	189047	0	189047
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	189047	0	189047
Runoff Pervious Areas (m^3/yr)	283570	0	283570
Runoff Impervious Areas (m^3/yr)	0	12576	12576
Total Runoff (m^3/yr)	283570	12576	296146
Total Outputs (m^3/yr)	**1123949**	**15720**	**1139669**
Difference (Inputs- Outputs)	**0**	**0**	**0**

NOTES:
* Evaporation from impervious areas was assumed to be 20% of precipitation.

CROZIER CONSULTING ENGINEERS

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Post-Development *without Mitigation* , Private Blocks 1-8
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Post-development area available for infiltration (landscaped/lawn area considered to infiltrate)
Post-development area not available for infiltration (total site area less landscaped area noted above)

Note: site land use areas consistent with Post-Development SWM hydrologic modeling & calculations

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	156806	1293154	1449960
Pervious Area (m^2)	156806	0	156806
Impervious Area (m^2)	0	1293154	1293154
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	597
Net Surplus (mm/yr)	331	629	597
Evapotranspiration (mm/yr) *	455	157	189
Infiltration (mm/yr)	132	0	14
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	14
Runoff Pervious Areas (mm/yr)	198	0	21
Runoff Impervious Areas (mm/yr)	0	629	561
Total Runoff (mm/yr)	198	629	582
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	123250	1016419	1139669
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**123250**	**1016419**	**1139669**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	51826	813135	864961
Net Surplus (m^3/yr)	51826	813135	864961
Evapotranspiration (m^3/yr) *	71423	203284	274707
Infiltration (m^3/yr)	20730	0	20730
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	20730	0	20730
Runoff Pervious Areas (m^3/yr)	31096	0	31096
Runoff Impervious Areas (m^3/yr)	0	813135	813135
Total Runoff (m^3/yr)	31096	813135	844231
Total Outputs (m^3/yr)	**123250**	**1016419**	**1139669**
Difference (Inputs- Outputs)	**0**	**0**	**0**

Pre-Development Total Infiltration:
189047 m^3/yr

NOTES:

* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 2
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	13749	m^3/yr	Target for Block 2
Area contributing to mitigation:	78408	m^2	assuming 90% of impervious area can be used for ponding
	175	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	185	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	5.2	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 3
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	24599	m^3/yr	Target for Block 3
Area contributing to mitigation:	171647	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 4
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	21819	m^3/yr	Target for Block 4
Area contributing to mitigation:	152248	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 5
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	20262	m^3/yr	Target for Block 5
Area contributing to mitigation:	141386	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 6
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	4535	m^3/yr	Target for Block 6
Area contributing to mitigation:	31647	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 7
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	21083	m^3/yr	Target for Block 7
Area contributing to mitigation:	147112	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 8
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	20004	m^3/yr	Target for Block 8
Area contributing to mitigation:	139579	m^2	assuming 90% of impervious area can be used for ponding
	143	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	151	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	4.3	mm	

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Post-Development *with Proposed Landscaping* , Private Block 1
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment - Block 1

Post-development area available for infiltration (landscaped/lawn area considered to infiltrate)
Post-development area not available for infiltration (total site area less landscaped area noted above)

Note: site land use areas consistent with Post-Development SWM hydrologic modeling & calculations

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	51440	312650	364090
Pervious Area (m^2)	51440	0	51440
Impervious Area (m^2)	0	312650	312650
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	587
Net Surplus (mm/yr)	331	629	587
Evapotranspiration (mm/yr) *	455	157	199
Infiltration (mm/yr)	132	0	19
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	19
Runoff Pervious Areas (mm/yr)	198	0	28
Runoff Impervious Areas (mm/yr)	0	629	540
Total Runoff (mm/yr)	198	629	568
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	40432	245743	286175
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**40432**	**245743**	**286175**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	17001	196594	213596
Net Surplus (m^3/yr)	17001	196594	213596
Evapotranspiration (m^3/yr) *	23430	49149	72579
Infiltration (m^3/yr)	6801	0	6801
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	6801	0	6801
Runoff Pervious Areas (m^3/yr)	10201	0	10201
Runoff Impervious Areas (m^3/yr)	0	196594	196594
Total Runoff (m^3/yr)	10201	196594	206795
Total Outputs (m^3/yr)	**40432**	**245743**	**286175**
Difference (Inputs- Outputs)	**0**	**0**	**0**

Infiltration Target:
42265 m^3/yr

NOTES:
* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - Block 1
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	40278	m^3/yr	
Area contributing to mitigation:	303510	m^2	(parking lot + 90% roof area)
	133	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	140	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	3.9	mm	

Note: A detailed landscape plan was only received for Block 1 at the time of writing this report. Based on the currently proposed landscaping within the block, the infiltration deficit was reduced to 40,278 m³/year, which can be mitigated by capturing and infiltrating 4.0 mm of rainfall over the parking lot and roof areas. It is noted that 90% of the roof area was used to determine the design storm, assuming some space will be required for mechanical equipment. To mitigate the remaining deficit, we recommend a list of feasible LID options in the report for consideration at the site plan stage.

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Pre-Development, Private Block 10
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	21350	0	21350
Pervious Area (m^2)	21350	0	21350
Impervious Area (m^2)	0	0	0
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	331
Net Surplus (mm/yr)	331	629	331
Evapotranspiration (mm/yr) *	455	157	455
Infiltration (mm/yr)	132	0	132
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	132
Runoff Pervious Areas (mm/yr)	198	0	198
Runoff Impervious Areas (mm/yr)	0	629	0
Total Runoff (mm/yr)	198	629	198
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	16781	0	16781
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**16781**	**0**	**16781**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	7056	0	7056
Net Surplus (m^3/yr)	7056	0	7056
Evapotranspiration (m^3/yr) *	9725	0	9725
Infiltration (m^3/yr)	2823	0	2823
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	2823	0	2823
Runoff Pervious Areas (m^3/yr)	4234	0	4234
Runoff Impervious Areas (m^3/yr)	0	0	0
Total Runoff (m^3/yr)	4234	0	4234
Total Outputs (m^3/yr)	**16781**	**0**	**16781**
Difference (Inputs- Outputs)	**0**	**0**	**0**

NOTES:
* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Post-Development *without Mitigation* , Private Block 10
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Post-development area available for infiltration (landscaped/lawn area considered to infiltrate)
Post-development area not available for infiltration (total site area less landscaped area noted above)

Note: site land use areas consistent with Post-Development SWM hydrologic modeling & calculations

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	21350	0	21350
Pervious Area (m^2)	21350	0	21350
Impervious Area (m^2)	0	0	0
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	331
Net Surplus (mm/yr)	331	629	331
Evapotranspiration (mm/yr) *	455	157	455
Infiltration (mm/yr)	132	0	132
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	132
Runoff Pervious Areas (mm/yr)	198	0	198
Runoff Impervious Areas (mm/yr)	0	629	0
Total Runoff (mm/yr)	198	629	198
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	16781	0	16781
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**16781**	**0**	**16781**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	7056	0	7056
Net Surplus (m^3/yr)	7056	0	7056
Evapotranspiration (m^3/yr) *	9725	0	9725
Infiltration (m^3/yr)	2823	0	2823
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	2823	0	2823
Runoff Pervious Areas (m^3/yr)	4234	0	4234
Runoff Impervious Areas (m^3/yr)	0	0	0
Total Runoff (m^3/yr)	4234	0	4234
Total Outputs (m^3/yr)	**16781**	**0**	**16781**
Difference (Inputs- Outputs)	**0**	**0**	**0**

Pre-Development Total Infiltration:
2823 m^3/yr

NOTES:

* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Pre-Development, Public Blocks
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	555730	2100	557830
Pervious Area (m^2)	555730	0	555730
Impervious Area (m^2)	0	2100	2100
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	332
Net Surplus (mm/yr)	331	629	332
Evapotranspiration (mm/yr) *	455	157	454
Infiltration (mm/yr)	132	0	132
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	132
Runoff Pervious Areas (mm/yr)	198	0	198
Runoff Impervious Areas (mm/yr)	0	629	2
Total Runoff (mm/yr)	198	629	200
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	436804	1651	438454
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**436804**	**1651**	**438454**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	183675	1320	184995
Net Surplus (m^3/yr)	183675	1320	184995
Evapotranspiration (m^3/yr) *	253129	330	253459
Infiltration (m^3/yr)	73470	0	73470
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	73470	0	73470
Runoff Pervious Areas (m^3/yr)	110205	0	110205
Runoff Impervious Areas (m^3/yr)	0	1320	1320
Total Runoff (m^3/yr)	110205	1320	111525
Total Outputs (m^3/yr)	**436804**	**1651**	**438454**
Difference (Inputs- Outputs)	**0**	**0**	**0**

NOTES:
* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project Name: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Checked By: RA
Date: 4-Apr-2023

Water Budget - Post-Development *without Mitigation* , Public Blocks
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

Post-development area available for infiltration (landscaped/lawn area considered to infiltrate)
Post-development area not available for infiltration (total site area less landscaped area noted above)

Note: site land use areas consistent with Post-Development SWM hydrologic modeling & calculations

Catchment Designation	Site - Post-Development		
	Pervious	Impervious	Totals
Area (m^2)	487706	70124	557830
Pervious Area (m^2)	487706	0	487706
Impervious Area (m^2)	0	70124	70124
Infiltration Factors			
Topography Infiltration Factor	0.1	0.1	
Soil Infiltration Factor	0.2	0.2	
Land Cover Infiltration Factor	0.1	0.1	
MOE Infiltration Factor	0.4	0.4	
Actual Infiltration Factor	0.4	0	
Run-off Coefficient	0.25	0.95	
Runoff from Impervious Surfaces *	0	0.8	
Inputs (per Unit Area)			
Precipitation (mm/yr)	786	786	786
Run-On (mm/yr)	0	0	0
Other Inputs (mm/yr)	0	0	0
Total Inputs (mm/yr)	**786**	**786**	**786**
Outputs (per Unit Area)			
Precipitation Surplus (mm/yr)	331	629	368
Net Surplus (mm/yr)	331	629	368
Evapotranspiration (mm/yr) *	455	157	418
Infiltration (mm/yr)	132	0	116
Mitigation Infiltration (mm/yr)	0	0	0
Total Infiltration (mm/yr)	132	0	116
Runoff Pervious Areas (mm/yr)	198	0	173
Runoff Impervious Areas (mm/yr)	0	629	79
Total Runoff (mm/yr)	198	629	252
Total Outputs (mm/yr)	**786**	**786**	**786**
Difference (Inputs- Outputs)	**0**	**0**	**0**
Inputs (Volumes)			
Precipitation (m^3/yr)	383337	55117	438454
Run-On (m^3/yr)	0	0	0
Other Inputs (m^3/yr)	0	0	0
Total Inputs (m^3/yr)	**383337**	**55117**	**438454**
Outputs (Volumes)			
Precipitation Surplus (m^3/yr)	161192	44094	205286
Net Surplus (m^3/yr)	161192	44094	205286
Evapotranspiration (m^3/yr) *	222145	11023	233168
Infiltration (m^3/yr)	64477	0	64477
Soakaway Infiltration (m^3/yr)	0	0	0
Total Infiltration (m^3/yr)	64477	0	64477
Runoff Pervious Areas (m^3/yr)	96715	0	96715
Runoff Impervious Areas (m^3/yr)	0	44094	44094
Total Runoff (m^3/yr)	96715	44094	140809
Total Outputs (m^3/yr)	**383337**	**55117**	**438454**
Difference (Inputs- Outputs)	**0**	**0**	**0**

Pre-Development Total Infiltration:
73470 m^3/yr

NOTES:
* Evaporation from impervious areas was assumed to be 20% of precipitation.

Project: Tullamore Lands
Project No: 2022-5842
Modelled By: IC
Date: 4-4-2023

Design Storm Determination - ROW
WOODBRIDGE - Climate Normals 1981-2010 Station Data
Water Balance/Water Budget Assessment

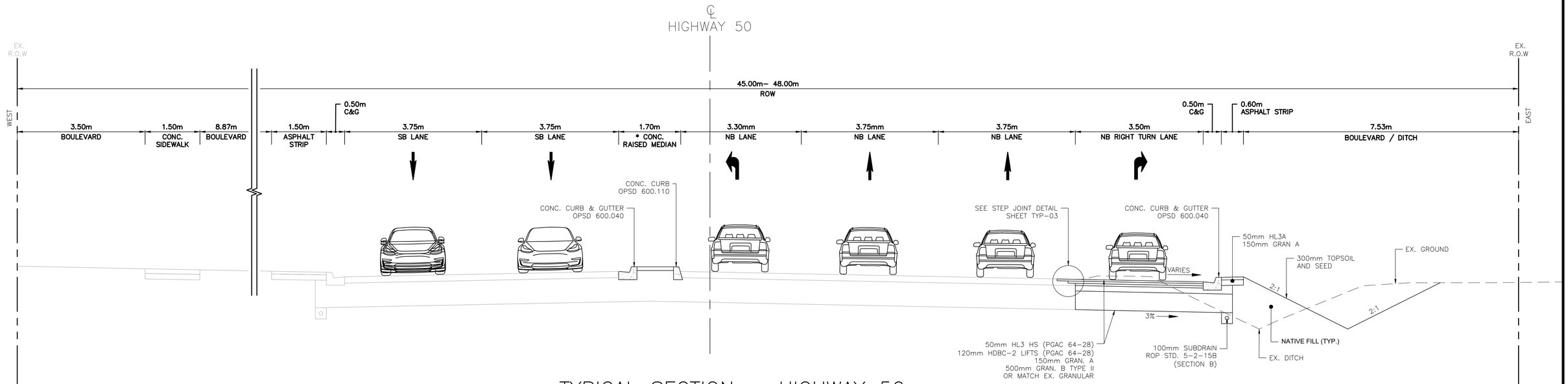
Days with Precipitation (From Climate Data)

	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
>= 0.2 mm	10.7	12	10.8	9.5	9.6	10.6	12.6	**76**
>= 5 mm	4	5.2	5.1	4.3	4.6	4.8	4.3	**32**
>= 10 mm	1.9	2.9	2.7	2.6	2.4	3	2	**18**
>= 25 mm	0.25	0.35	0.32	0.36	0.77	0.68	0.23	**3**

Available Precipitation

Storm Event (mm)	Total Days Per Year	Incremental Precipitation (mm/yr)	Cummulative Precipitation (mm/yr)
0.2	76	15.2	15.2
5	32	161.5	176.7
10	18	175.0	351.7
25	3	74.0	425.7
Total	**129**	**425.7**	

Infiltration Deficit Target:	8993	m^3/yr	Target for ROW
Area contributing to mitigation:	76005	m^2	Assuming all impervious area within the ROW can be directed to LIDs
	118	mm/yr	
unoff Coefficient for Impervious Area:	0.95		
Design Precipitation:	125	mm/yr	(Design Infiltration / Contributing RC)
Therefore Design Storm:	3.5	mm	

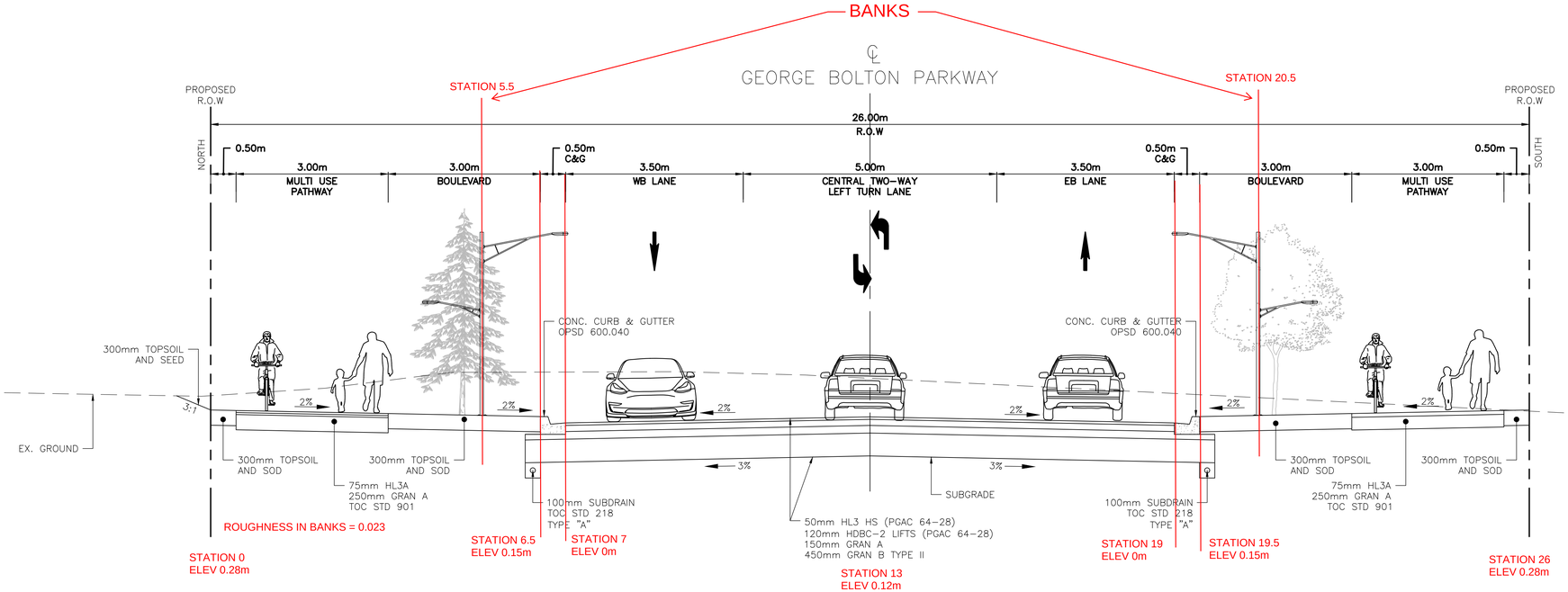


TYPICAL SECTION – HIGHWAY 50

STA. 9+821.457 TO STA. 10+067.327

* SOUTH = STA. 9+947.938 TO STA. 9+978.688

* NORTH = STA. 10+020.177 TO STA. 10+067.327



TYPICAL SECTION – GEORGE BOLTON PARKWAY

STA. 1+026.81 TO STA. 1+541.60

LANDSCAPING = 27%

NOTE: ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.

NO.	BY	DATE	REVISION	CONS. CHECKED	TOWN APPR'D
1	A.I.	22/04/22	60% DESIGN REVIEW SUBMISSION		

APPROVED FOR CONSTRUCTION

THIS APPROVAL CONSTITUTES A GENERAL REVIEW AND DOES NOT CERTIFY DIMENSIONAL ACCURACY.

THIS APPROVAL IS SUBJECT TO THE FURTHER CERTIFICATION OF THE "AS RECORDED" WORKS BY A REGISTERED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO.

DATE :_____ APPROVED BY:_____

MANAGER OF ENGINEERING SERVICES

BENCH MARK:

ENGINEER'S STAMP

PROJECT NAME

GEORGE BOLTON PARKWAY EXTENSION

CONSULTANT

BURNSIDE

R.J. Burnside & Associates Limited
6990 Creditview Road, Unit 2
Mississauga, Ontario, L5N 8R9
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fax (905) 821-1809
web www.rjburnside.com

REGION OF PEEL

TOWN OF CALEDON

GEORGE BOLTON PARKWAY / HIGHWAY 50

TYPICAL CROSS SECTIONS

SCALE: N.T.S.			PROJECT No. 300052765
DESIGNED BY: R.B.	DRAWN BY: R.B.		DRAWING No. TYP–01
CHECKED BY: A.I.	DATE: 2021/05/19		SHEET No. 46 OF 94

Plotted – April 21, 2022 File: \\moniy\Shared Work Areas\052765 George Bolton Ext\03_Production\dwg\10–052765–Typical_Cross_Sections.dwg

Project: Tullamore Lands
Project No.: 2022-5842
Design by: IC/RA
Date: 2023-01-18

SWM Pond Stage - Storage - Discharge Table - Wetland 1

	c	Diameter / Length	Diameter / Height	Control Elevation	Invert Elevation	Number of Contractions
Circular Orifice Control	0.62	0.250	0.250	232.625	232.50	
Rectangular Orifice Control	0.62	1.200	0.500	233.400	233.15	2
Rectangular Orifice Control	0.62	1.500	0.500	234.050	233.80	2

Weir Coefficient	1.56
Emergency Spillway Invert Elevation	234.50 m
Emergency Spillway Bottom Width	25 m
Side Slopes	33%

Operating Level	Elevation (m)	Depth Above Permanent Pool (m)	Area (m^2)	Storage Volume (m^3)	Storage Volume (ha-m)	Circular Orifice Control Discharge (cms)	Rectangular Orifice Control Discharge (cms)	Rectangular Orifice Control Discharge (cms)	Emergency Spillway Weir Average Width (m)	Emergency Spillway Weir Discharge (cms)	Total Outflow (cms)
Top of Permanent Pool	232.50	0.00	22,369	0.00	0.0000	0.000					0.000
	232.55	0.05	22,867	1,131	0.1131	0.000					0.000
	232.60	0.10	23,078	2,280	0.2280	0.000					0.000
	232.65	0.15	23,287	3,439	0.3439	0.021					0.021
	232.70	0.20	23,492	4,608	0.4608	0.037					0.037
	232.75	0.25	23,694	5,788	0.5788	0.048					0.048
	232.80	0.30	23,899	6,978	0.6978	0.056					0.056
	232.85	0.35	24,517	8,188	0.8188	0.064					0.064
	232.90	0.40	25,069	9,428	0.9428	0.071					0.071
	232.95	0.45	25,636	10,695	1.0695	0.077					0.077
	233.00	0.50	26,219	11,992	1.1992	0.083					0.083
	233.05	0.55	26,818	13,318	1.3318	0.088					0.088
	233.10	0.60	27,541	14,677	1.4677	0.093					0.093
Top of Extended Detention	233.15	0.65	27,676	16,057	1.6057	0.098	0.000				0.098
	233.20	0.70	27,808	17,444	1.7444	0.102	0.024				0.127
	233.25	0.75	27,938	18,838	1.8838	0.107	0.069				0.175
	233.30	0.80	28,067	20,238	2.0238	0.111	0.125				0.236
	233.35	0.85	28,194	21,644	2.1644	0.115	0.191				0.306
	233.40	0.90	28,320	23,057	2.3057	0.119	0.265				0.383
	233.45	0.95	28,446	24,476	2.4476	0.122	0.345				0.467
	233.50	1.00	28,571	25,902	2.5902	0.126	0.431				0.557
	233.55	1.05	28,696	27,334	2.7334	0.130	0.521				0.651
	233.60	1.10	28,820	28,771	2.8771	0.133	0.617				0.750
	233.65	1.15	28,944	30,216	3.0216	0.136	0.824				0.960
	233.70	1.20	29,067	31,666	3.1666	0.140	0.903				1.042
	233.75	1.25	29,190	33,122	3.3122	0.143	0.975				1.118
	233.80	1.30	29,312	34,585	3.4585	0.146	1.042	0.000			1.188
	233.85	1.35	29,434	36,053	3.6053	0.149	1.105	0.031			1.285
	233.90	1.40	29,556	37,528	3.7528	0.152	1.165	0.086			1.403
	233.95	1.45	29,677	39,009	3.9009	0.155	1.222	0.157			1.534
	234.00	1.50	29,798	40,496	4.0496	0.158	1.276	0.240			1.675
	234.05	1.55	29,919	41,989	4.1989	0.161	1.328	0.334			1.823
100-Year Water Level (234.07)	234.10	1.60	30,040	43,488	4.3488	0.164	1.379	0.435			1.978
	234.15	1.65	30,160	44,993	4.4993	0.166	1.427	0.545			2.138
	234.20	1.70	30,280	46,504	4.6504	0.169	1.474	0.661			2.304
	234.25	1.75	30,400	48,021	4.8021	0.172	1.519	0.783			2.474
	234.30	1.80	30,519	49,544	4.9544	0.174	1.563	1.030			2.768
	234.35	1.85	30,639	51,073	5.1073	0.177	1.606	1.128			2.911
	234.40	1.90	30,760	52,608	5.2608	0.180	1.648	1.219			3.046
	234.45	1.95	30,883	54,149	5.4149	0.182	1.688	1.303			3.173
Top of Active Storage	234.50	2.00	31,009	55,696	5.5696	0.185	1.728	1.382	25.0	0.000	3.294
	234.55	2.05	31,143	57,250	5.7250	0.187	1.767	1.456	25.2	0.439	3.849
	234.60	2.10	31,273	58,810	5.8810	0.189	1.805	1.528	25.3	1.248	4.770
	234.65	2.15	31,402	60,377	6.0377	0.192	1.842	1.595	25.5	2.307	5.936
	234.70	2.20	31,529	61,950	6.1950	0.194	1.879	1.661	25.6	3.573	7.306
Top of Pond	234.80	2.30	31,789	65,116	6.5116	0.199	1.950	1.784	25.9	6.641	10.574

Project: Tullamore Lands
Project No.: 2022-5842
Design by: IC/RA
Date: 2023-01-18

SWM Pond Stage - Storage - Discharge Table - Wetland 2

	c	Diameter / Length	Diameter / Height	Control Elevation	Invert Elevation	Number of Contractions
Circular Orifice Control	0.62	0.250	0.250	231.125	231.00	
Rectangular Orifice Control	0.62	1.200	0.500	231.850	231.60	2
Rectangular Orifice Control	0.62	1.500	0.500	232.500	232.25	2

Weir Coefficient	1.56
Emergency Spillway Invert Elevation	233.00 m
Emergency Spillway Bottom Width	85 m
Side Slopes	33%

Operating Level	Elevation (m)	Depth Above Permanent Pool (m)	Area (m^2)	Storage Volume (m^3)	Storage Volume (ha-m)	Circular Orifice Control Discharge (cms)	Rectangular Orifice Control Discharge (cms)	Rectangular Orifice Control Discharge (cms)	Emergency Spillway Weir Average Width (m)	Emergency Spillway Weir Discharge (cms)	Total Outflow (cms)
Top of Permanent Pool	231.00	0.00	24,816	0.00	0.0000	0.000					0.000
	231.05	0.05	26,349	1,279	0.1279	0.000					0.000
	231.10	0.10	26,718	2,606	0.2606	0.000					0.000
	231.15	0.15	27,087	3,951	0.3951	0.021					0.021
	231.20	0.20	27,457	5,315	0.5315	0.037					0.037
	231.25	0.25	27,827	6,697	0.6697	0.048					0.048
	231.30	0.30	28,198	8,097	0.8097	0.056					0.056
	231.35	0.35	28,568	9,516	0.9516	0.064					0.064
	231.40	0.40	28,939	10,954	1.0954	0.071					0.071
	231.45	0.45	29,310	12,410	1.2410	0.077					0.077
	231.50	0.50	29,681	13,885	1.3885	0.083					0.083
	231.55	0.55	30,053	15,378	1.5378	0.088					0.088
Top of Extended Detention	231.60	0.60	30,562	16,894	1.6894	0.093	0.000				0.093
	231.65	0.65	30,672	18,425	1.8425	0.098	0.024				0.122
	231.70	0.70	30,782	19,961	1.9961	0.102	0.069				0.171
	231.75	0.75	30,893	21,503	2.1503	0.107	0.125				0.232
	231.80	0.80	31,004	23,050	2.3050	0.111	0.191				0.302
	231.85	0.85	31,116	24,603	2.4603	0.115	0.265				0.379
	231.90	0.90	31,227	26,162	2.6162	0.119	0.345				0.463
	231.95	0.95	31,338	27,726	2.7726	0.122	0.431				0.553
	232.00	1.00	31,450	29,296	2.9296	0.126	0.521				0.647
	232.05	1.05	31,562	30,871	3.0871	0.130	0.617				0.746
	232.10	1.10	31,674	32,452	3.2452	0.133	0.824				0.957
	232.15	1.15	31,786	34,038	3.4038	0.136	0.903				1.039
	232.20	1.20	31,898	35,630	3.5630	0.140	0.975				1.115
	232.25	1.25	32,010	37,228	3.7228	0.143	1.042	0.000			1.185
	232.30	1.30	32,123	38,831	3.8831	0.146	1.105	0.031			1.282
	232.35	1.35	32,235	40,440	4.0440	0.149	1.165	0.086			1.400
	232.40	1.40	32,348	42,055	4.2055	0.152	1.222	0.157			1.531
100-Year Water Level (232.43)	232.45	1.45	32,461	43,675	4.3675	0.155	1.276	0.240			1.672
	232.50	1.50	32,574	45,301	4.5301	0.158	1.328	0.334			1.820
	232.55	1.55	32,687	46,933	4.6933	0.161	1.379	0.435			1.975
	232.60	1.60	32,800	48,570	4.8570	0.164	1.427	0.545			2.136
	232.65	1.65	32,914	50,213	5.0213	0.166	1.474	0.661			2.301
	232.70	1.70	33,027	51,861	5.1861	0.169	1.519	0.783			2.472
	232.75	1.75	33,141	53,515	5.3515	0.172	1.563	1.030			2.765
	232.80	1.80	33,255	55,175	5.5175	0.174	1.606	1.128			2.909
	232.85	1.85	33,369	56,841	5.6841	0.177	1.648	1.219			3.043
	232.90	1.90	33,483	58,512	5.8512	0.180	1.688	1.303			3.171
	232.95	1.95	33,598	60,189	6.0189	0.182	1.728	1.382			3.292
Top of Active Storage	233.00	2.00	33,744	61,873	6.1873	0.185	1.767	1.456	85.0	0.000	3.408
	233.05	2.05	33,860	63,563	6.3563	0.187	1.805	1.528	85.2	1.485	5.005
	233.10	2.10	33,975	65,259	6.5259	0.189	1.842	1.595	85.3	4.208	7.835
	233.15	2.15	34,090	66,960	6.6960	0.192	1.879	1.661	85.5	7.745	11.476
	233.20	2.20	34,204	68,668	6.8668	0.194	1.915	1.723	85.6	11.945	15.777
	233.25	2.25	34,316	70,381	7.0381	0.197	1.950	1.784	85.8	16.723	20.653
	233.30	2.30	34,400	72,099	7.2099	0.199	1.984	1.842	85.9	22.021	26.047
Top of Pond	233.40	2.40	34,405	75,539	7.5539	0.203	2.051	1.954	86.2	34.024	38.233

Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Permanent Pool Volume Calculations - Wetland 1

Area Name	Drainage Area			
$A_{to\text{-}pond}$ =	81.10	ha	Percent Impervious	90.0%
$V_{permanent\ pool}$ =	8,844	m^3	Percent Pervious	10.0%
$V_{extended\ detention\ (MECP)}$ =	3,244	m^3		
$V_{extended\ detention\ (25\ mm\ event)}$ =	15,979	m^3		

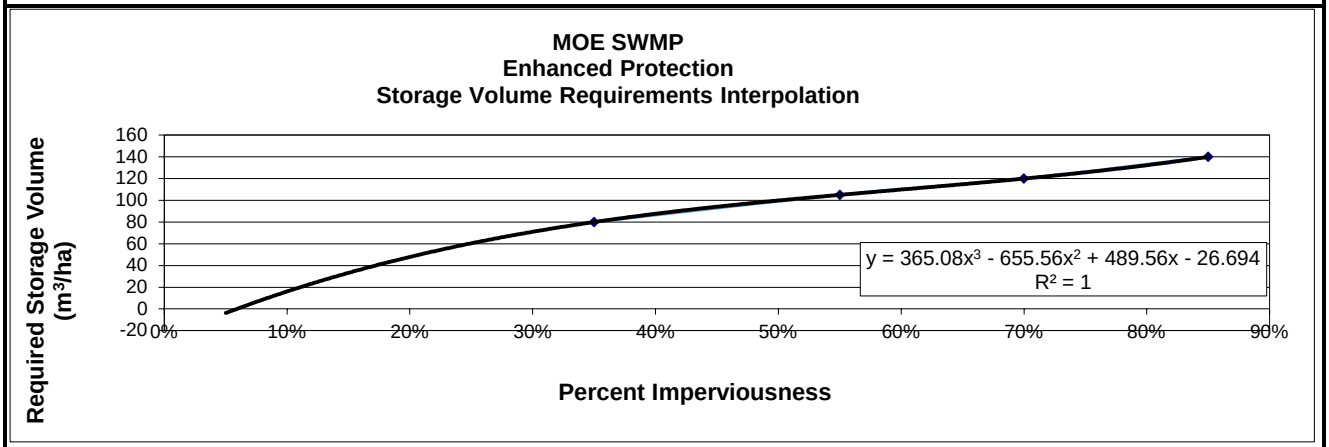
Storage Volume:	V =	149 m^3 / ha	
Extended Detention:	V =	40 m^3 / ha	
Permanent Pool:	V =	109 m^3 / ha	
Base Runoff:	V =	19.70 mm	Runoff volume from 25mm VO Model for 87.05 ha upstream drainage area

therefore, require extended detention storage of 15,979 m^3
and permanent pool volume of 8,844 m^3

MOE 2003 SWMP Manual: Water Quality Storage Requirements based on Receiving Waters *

PROTECTION LEVEL	SWMP Type	STORAGE VOLUME (m^3 / ha) FOR IMPERVIOUS LEVEL				
		35%	55%	70%	85%	90%
Enhanced	Wetland	80	105	120	140	**149**
Normal	Wetland	60	70	80	90	
Basic	Wetland	60	60	60	60	

* Table 3.2 from the MOE SWMP Planning & Design Manual, 2004, pg 3-10



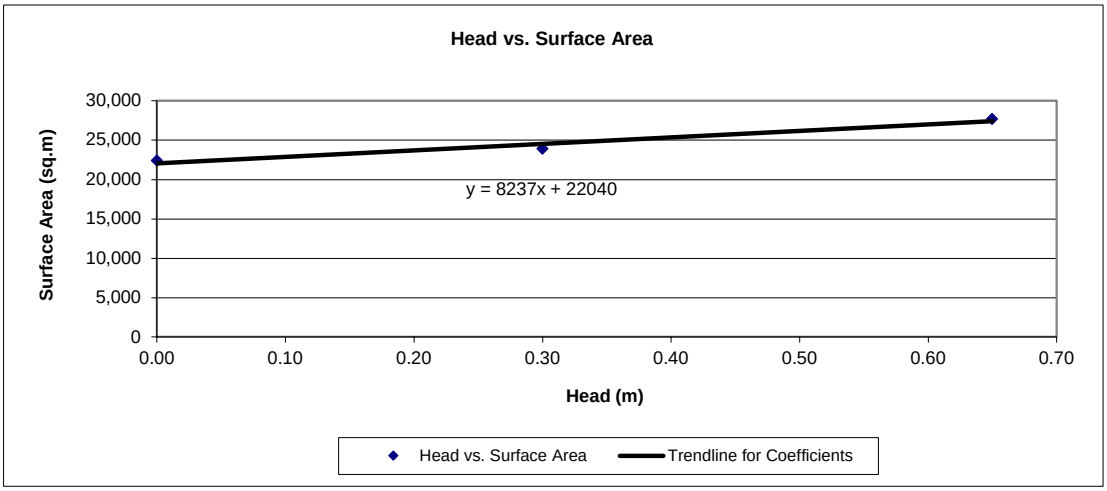
Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Extended Detention Drawdown Calculations - Wetland 1

MOE Detention Time Calculation:

Active Storage:

	Elevation (m)	Head (m)	Surface Area (m^2)
NWL	232.50	0.00	22,369
	232.80	0.30	23,899
Ext. Det.	233.15	0.65	27,676



D_o= 250 mm
A_o= 0.0491 m^2
C_1= 8,237.0
C_2= 22,040
t= $((0.66*C_1*h^{1.5})+(2*C_2*h^{0.5}))/2.75A_o$
t= ((0.66*(8237)*h^1.5)+(2*(22040)*h^0.5))/2.75Ao
h= 0.65 m
t= 251921.8 s
Ext. Det. = **70.0 hr**

CROZIER CONSULTING ENGINEERS

Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Forebay Sizing Calculations - Wetland 1

Settling Calculations

Proposed Forebay Length	105	m	
Proposed Forebay Width	48	m	

$$Dist = \sqrt{\frac{rQ_P}{V_S}}$$

Eq. 4.5 MOE SWM Planning and Design Manual, 2003

Water Quality Design Flow Rate from Pond (Q_p)	0.093	m^3/s	(25 mm, 4 hour Chicago)
Length to Width Ratio of Forebay (r)	2.2	:1	
Settling Velocity (V_s)	0.0003	m/s	
Minimum Forebay Length for Settling	**26**	**m**	

Dispersion Length Calculations

$$Dist = \frac{8Q}{dV_F}$$

Eq. 4.6 MOE SWM Planning and Design Manual, 2003

Inlet Flowrate (Q)	3.00	m^3/s	(5-year inlet flow)
Permanent Pool Depth in Forebay	1.5	m	
Desired velocity in forebay (V_f)	0.5	m/s	
Minimum Dispersion Length	**32**	**m**	
Minimum Bottom Width	**4.0**	**m**	

The proposed forebay meets all minimum size requirements

Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Permanent Pool Volume Calculations - Wetland 2

Area Name	Drainage Area			
$A_{to\text{-}pond}$ =	78.78	ha	Percent Impervious	90.0%
$V_{permanent\ pool}$ =	8,591	m^3	Percent Pervious	10.0%
$V_{extended\ detention\ (MECP)}$ =	3,151	m^3		
$V_{extended\ detention\ (25\ mm\ event)}$ =	15,446	m^3		

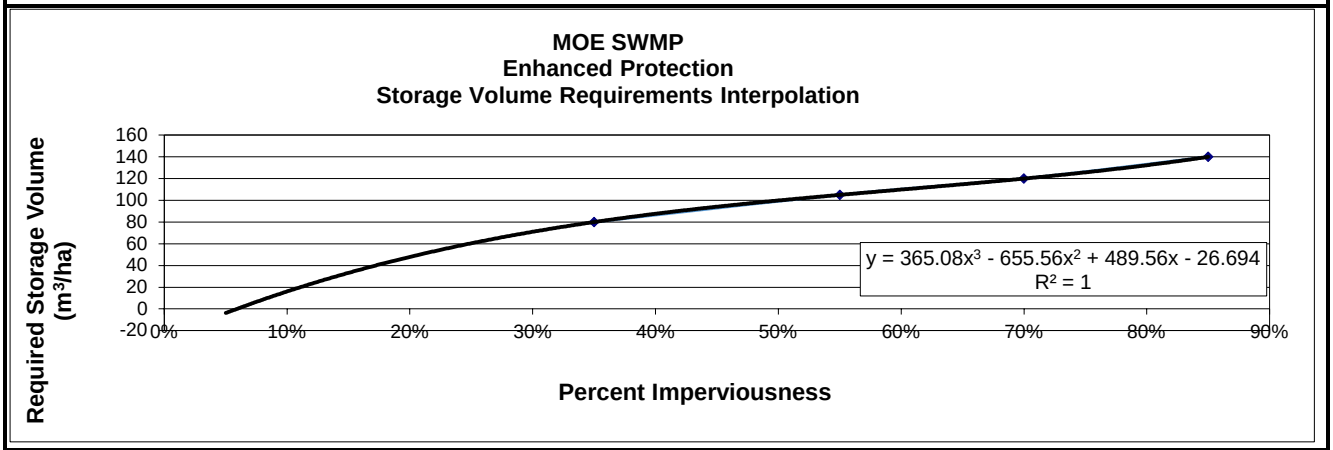
Storage Volume:	V =	149 m^3 / ha	
Extended Detention:	V =	40 m^3 / ha	
Permanent Pool:	V =	109 m^3 / ha	
Base Runoff:	V =	19.61 mm	Runoff volume from 25mm VO Model for 84.33 ha upstream drainage area

therefore, require extended detention storage of 15,446 m^3
and permanent pool volume of 8,591 m^3

MOE 2003 SWMP Manual: Water Quality Storage Requirements based on Receiving Waters *

PROTECTION LEVEL	SWMP Type	STORAGE VOLUME (m^3 / ha) FOR IMPERVIOUS LEVEL				
		35%	55%	70%	85%	90%
Enhanced	Wetland	80	105	120	140	**149**
Normal	Wetland	60	70	80	90	
Basic	Wetland	60	60	60	60	

* Table 3.2 from the MOE SWMP Planning & Design Manual, 2004, pg 3-10



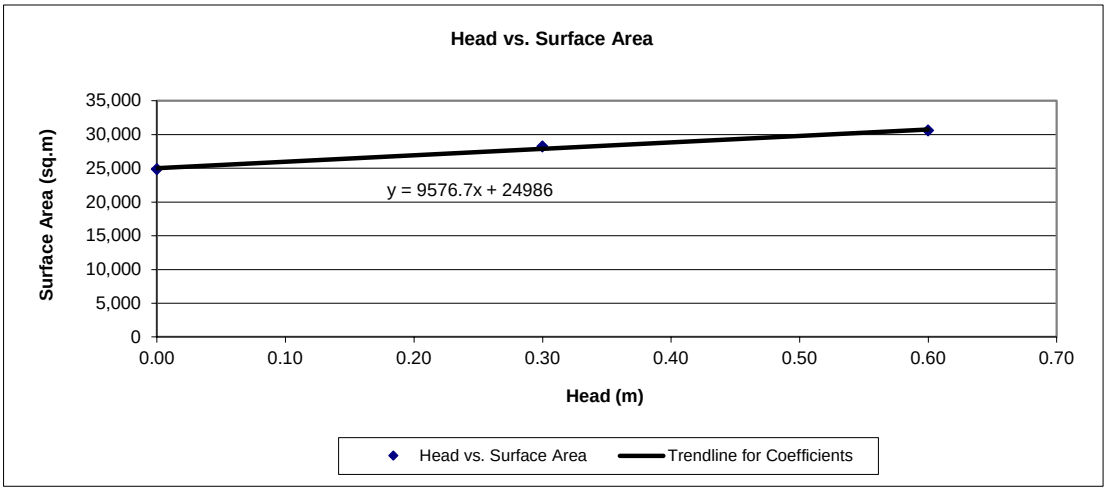
Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Extended Detention Drawdown Calculations - Wetland 2

MOE Detention Time Calculation:

Active Storage:

	Elevation (m)	Head (m)	Surface Area (m^2)
NWL	231.00	0.00	24,816
	231.30	0.30	28,198
Ext. Det.	231.60	0.60	30,562



D_o= 250 mm
A_o= 0.0491 m^2
C_1= 9,576.7
C_2= 24,986
t= $((0.66*C_1*h^{1.5})+(2*C_2*h^{0.5}))/2.75A_o$
t= ((0.66*(9576.7)*h^1.5)+(2*(24986)*h^0.5))/2.75Ao
h= 0.60 m
t= 270464.0 s
Ext. Det. = **75.1 hr**

CROZIER CONSULTING ENGINEERS

Project: Tullamore
File: 2022-5842
Designed by: IC
Checked by: RA
Date: 18-Jan-23

Forebay Sizing Calculations - Wetland 2

Settling Calculations

Proposed Forebay Length	110	m	
Proposed Forebay Width	37	m	

$$Dist = \sqrt{\frac{rQ_P}{V_S}}$$

Eq. 4.5 MOE SWM Planning and Design Manual, 2003

Water Quality Design Flow Rate from Pond (Q_p)	0.094	m^3/s	(25 mm, 4 hour Chicago)
Length to Width Ratio of Forebay (r)	3.0	:1	
Settling Velocity (V_s)	0.0003	m/s	

Minimum Forebay Length for Settling **31 m**

Dispersion Length Calculations

$$Dist = \frac{8Q}{dV_F}$$

Eq. 4.6 MOE SWM Planning and Design Manual, 2003

Inlet Flowrate (Q)	2.88	m^3/s	(5-year inlet flow)
Permanent Pool Depth in Forebay	1.5	m	
Desired velocity in forebay (V_f)	0.5	m/s	

Minimum Dispersion Length **31 m**

Minimum Bottom Width **3.8 m**

The proposed forebay meets all minimum size requirements

Worksheet for Broad Crested Weir - Wetland 1 Forebay Spillway

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		5.27	m^3/s
Crest Elevation		232.50	m
Tailwater Elevation		0.00	m
Crest Surface Type	Gravel		
Crest Breadth		3.00	m
Crest Length		21.00	m

Results

Headwater Elevation	232.80	m
Headwater Height Above Crest	0.30	m
Tailwater Height Above Crest	-232.50	m
Weir Coefficient	1.56	SI
Submergence Factor	1.00	
Adjusted Weir Coefficient	1.56	SI
Flow Area	6.21	m^2
Velocity	0.85	m/s
Wetted Perimeter	21.59	m
Top Width	21.00	m

Worksheet for Broad Crested Weir - Wetland 2 Forebay Spillway

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		5.06	m^3/s
Crest Elevation		231.00	m
Tailwater Elevation		0.00	m
Crest Surface Type	Gravel		
Crest Breadth		3.00	m
Crest Length		20.00	m

Results

Headwater Elevation	231.30	m
Headwater Height Above Crest	0.30	m
Tailwater Height Above Crest	-231.00	m
Weir Coefficient	1.56	SI
Submergence Factor	1.00	
Adjusted Weir Coefficient	1.56	SI
Flow Area	5.95	m^2
Velocity	0.85	m/s
Wetted Perimeter	20.59	m
Top Width	20.00	m

FIGURES



PROPERTY LINE
GREENBELT BOUNDARY
PROPOSED SANITARY DRAINAGE CATCHMENT
EXISTING SANITARY SEWER & MANHOLE
PROPOSED SANITARY SEWER
PROPOSED SANITARY SEWER (BY OTHERS)
SANITARY BLOCK OUTLET
CATCHMENT I.D.
AREA (ha) / POPULATION PER BUILDING AREA

SCALE: 1:2500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

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EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

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ELEVATION HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

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Project
TULLAMORE LANDS
TOWN OF CALEDON

Drawing
SANITARY DRAINAGE AREA PLAN

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
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905-875-4915 F
www.cfcrozier.ca

Drawn	V.M./L.F.	Design	A.S./A.D.F.	Project No.	2022-5842
Check	J.S.	Check	R.S.A.	Scale	1:2500
				Dwg	FIG-1



No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

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Project

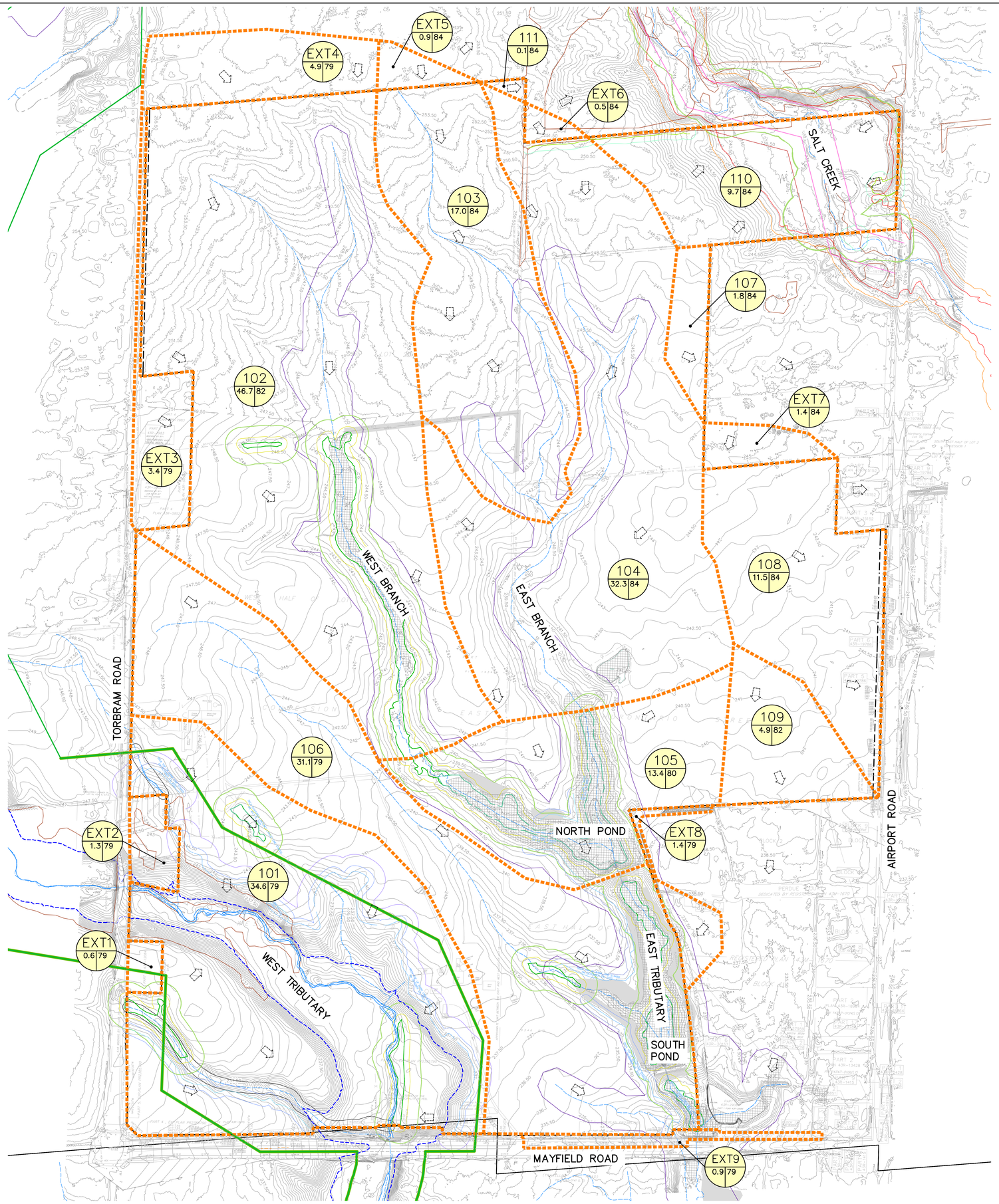
TULLAMORE LANDS
TOWN OF CALEDON

Drawing

WATER DISTRIBUTION PLAN

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2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
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Drawn	Design	Project No.
V.M./L.E.	A.S./A.D.F.	2022-5842
Check	Check	Scale / Dwg
D.L./J.S.	D.L./J.S.	1:3000 / FIG-2





LEGEND

- PROPERTY LINE
- EXISTING CONTOUR (1.0m)
- EXISTING CONTOUR (2.0m)
- EXISTING STORM DRAINAGE CATCHMENT
- GREENBELT BOUNDARY
- WATERCOURSE
- REGIONAL ENGINEERED FLOODPLAIN (TRCA, 2021)
- REGIONAL TRCA LIMIT
- FLOOD LINE (CROZIER, 2023)
- FLOOD LINE + 15m (CROZIER, 2023)
- FLOOD LINE (TRCA, 2022)
- FLOOD LINE + 15m (TRCA, 2022)
- STAKED DRIPLINE (GEI, 2023)
- WOODLAND +10m (GEI, 2023)
- WOODLAND (GEI, 2022)
- WETLAND +30m (GEI, 2022)
- WETLAND +10m (GEI, 2022)
- WETLAND LIMIT (GEI 2022)
- MEANDER BELT (GEI, 2023)
- MEANDER BELT + 30m (GEI 2023)
- TRCA STAKED NATURAL FEATURES/STABLE TOP OF SLOPE (GEI, 2022)
- LONG TERM STABLE TOP OF SLOPE +10m (GEI, 2022)
- STAKED NATURAL FEATURES + 30m (GEI 2022)
- EXISTING WETLANDS (GEI, 2022)
- EXISTING WOODLANDS (GEI, 2022)
- EXISTING OVERLAND FLOW DIRECTION
- ID — CATCHMENT I.D.
- A | CN — AREA (Ha) | SCS CURVE NUMBER

50 0m 50 100 150 200
SCALE: 1:2500

No.	ISSUE / REVISION	YYYY/MMM/DD
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FILE No.: 10208

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Project

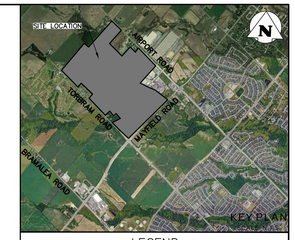
TULLAMORE LANDS
TOWN OF CALEDON

Drawing

PRE-DEVELOPMENT DRAINAGE PLAN

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905.875.0026 T
905.875.4915 F
www.cfcrozier.ca

Drawn	Design	Project No.	
L.E.	I.C.		2022-5842
Check	Check	Scale	Dwg.
I.C./J.S.	R.S.A.	1:2500	FIG-3



LEGEND

- PROPERTY LINE
- GREENBELT BOUNDARY
- REGIONAL ENGINEERED FLOODPLAIN (TRCA, 2021)
- STAKED NATURAL FEATURES + 30m (GEI 2022)
- REGIONAL TRCA LIMIT
- WATERCOURSE
- FLOOD LINE (TRCA, 2022)
- FLOOD LINE + 15m (TRCA, 2022)
- STAKED DRIPLINE (GEI, 2023)
- WOODLAND +10m (GEI, 2023)
- WOODLAND (GEI, 2022)
- MEANDER BELT (GEI, 2023)
- MEANDER BELT + 30m (GEI 2023)
- EXISTING OVERLAND FLOW DIRECTION
- PROPOSED OVERLAND FLOW DIRECTION
- INTERNAL PROPOSED DRAINAGE AREA
- EXISTING EXTERNAL DRAINAGE AREA
- ID / AREA (Ha) | SCS CURVE NUMBER — CATCHMENT I.D.
- ID / A | CN / Q — CATCHMENT I.D.; AREA (Ha) | SCS CURVE NUMBER; ALLOWABLE RELEASE RATE (L/s)

THIS DRAINAGE PLAN WAS CREATED WITH THE ASSUMPTION THAT THE EXISTING PONDS IN THE EAST TRIBUTARY CAN BE REMOVED/REPLACED.

CATCHMENT 201 (ROOF REDIRECTION TO THE WEST TRIBUTARY)
MINIMUM AREA REQUIRED = 0.92ha
CN = 98

NOTE: ROOF AREA REDIRECTED TO THE WEST TRIBUTARY TO BE CONFIRMED DURING DETAILED DESIGN OF BLOCK 2

COUNTRY SIDE VILLAGES BLOCK 48-2 SECONDARY PLAN AREA OZS-2019-0013/21T-1902 SANDRINGHAM EAST

SCALE: 1:2500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

FOR REVIEW
NOT TO BE USED FOR CONSTRUCTION

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-87501

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE COVD-1928: 1978 DATUM.

ELEVATION HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC.
DRAWING No.: D3
FILE No.: 10208

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ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project: TULLAMORE LANDS
TOWN OF CALEDON

Drawing: POST-DEVELOPMENT DRAINAGE PLAN

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

Drawn	L.E.	Design	I.C.	Project No.	2022-5842
Check	I.C./J.S.	Check	R.S.A.	Scale	1:2500
				Dwg	FIG-4



LEGEND

- PROPERTY LINE
- GREENBELT BOUNDARY
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER & MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED STORM SEWER (BY OTHERS)
- PROPOSED SANITARY SEWER (BY OTHERS)
- DRAINAGE EASEMENT
- SANITARY EASEMENT

SCALE: 1:1500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL ENGINEER — A. D. FARINA — 100523860 — 2023-04-06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEER — J. M. SCOTT — 100214964 — APR 6 2023 — PROVINCE OF ONTARIO

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-87601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HERON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE CVD-1928: 1978 DATUM.

ELEVATION HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC. DRAWING No.: 03
FILE No.: 10208

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Project: TULLAMORE LANDS
TOWN OF CALEDON

Drawing: PRELIMINARY STORM & SANITARY SERVICING PLAN – NORTH

CROZIER CONSULTING ENGINEERS
2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905.675.0026 T
905.875.4915 F
WWW.CFCROZIER.CA

Drawn	Design	Project No.	
V.M./L.E.	A.S./A.D.F.	2022-5842	
Check	Check	Scale	Dwg.
D.L./J.S.	D.L./J.S.	1:1500	C101

SANITARY TRUNK SEWER HAS BEEN SIZED PER REGION OF PEEL WASTEWATER MASTER PLAN. TRUNK SEWER HAS CAPACITY TO ACCOMMODATE EXTERNAL LANDS NORTH OF THE TULLAMORE LANDS

SANITARY TRUNK SEWER HAS BEEN SIZED PER REGION OF PEEL WASTEWATER MASTER PLAN. TRUNK SEWER HAS CAPACITY TO ACCOMMODATE EXTERNAL LANDS WEST OF TORBRAM ROAD

BLOCK 7
18.162 ha

BLOCK 15
BUFFER BLOCK
0.788 ha

BLOCK 9
EPA
5.632 ha

BLOCK 20
ROAD WIDENING

BLOCK 3
21.191ha

BLOCK 8
17.232 ha

BLOCK 1
36.409 ha

BLOCK 4
18.796 ha

BLOCK 5
17.455 ha

BLOCK 18
ROAD WIDENING

BLOCK 19
ROAD WIDENING

STREET B

STREET C

STREET A

TORBRAM ROAD

AIRPORT ROAD

WEST HALF OF LOT 20

EAST HALF OF LOT 20

WEST HALF OF LOT 19

PART 15 43R-19786
PART 14 43R-19786
PART 11 43R-19786
PART 10 43R-19786
PART 9 43R-19786
PART 8 43R-19786
PART 7 43R-19786
PART 5 43R-19786
PART 4 43R-19786
PART 1 43R-15152
PART 2 43R-15152
PART 3 43R-15152
PART 4 PLAN 43R-7983
PART 1 43R-7983
PART 2 PLAN 43R-5852
PART 1 43R-5852
PART 3 PLAN 43R-5852
PART 4 PLAN 43R-5852

SAN MH1A T/G 254.24 NE INV 238.22
SAN MH1 T/G 253.25 NE INV 251.21
SAN MH2A T/G 252.62 NE INV 237.65 SW INV 237.70
SAN MH2 T/G 252.65 NE INV 250.64 SW INV 250.66
SAN MH3A T/G 251.98 NE INV 237.41 SW INV 237.44
SAN MH3 T/G 252.05 NE INV 250.01 SW INV 250.09
SAN MH4A T/G 250.71 NE INV 236.94 SW INV 236.97
SAN MH4 T/G 250.83 NE INV 248.74 SW INV 248.82
SAN MH5A T/G 249.71 NE INV 236.54 SW INV 236.57
SAN MH5 T/G 249.73 NE INV 247.56 SW INV 247.58
SAN MH6A T/G 248.58 NE INV 236.08 SW INV 236.13 NW INV 236.40
SAN MH6 T/G 248.61 SW INV 246.37 NE INV 246.35
SAN MH7A T/G 249.24 SE INV 235.65 NW INV 235.68 SW INV 235.74
SAN MH7 T/G 249.19 SE INV 242.13 SW INV 245.33 NW INV 242.21
SAN MH8A T/G 253.46 SE INV 236.76
STM MH8 T/G 253.38 SE INV 245.62
SAN MH9 T/G 251.92 SE INV 244.58 NW INV 244.65
SAN MH10A T/G 251.96 SE INV 236.37 NW INV 236.42
STM MH10 T/G 250.18 NW INV 243.42 SE INV 243.40
STM MH11 T/G 249.61 SE INV 242.49 NW INV 243.02 SW INV 242.57
STM MH7 T/G 249.19 SE INV 242.13 SW INV 245.33 NW INV 242.21
SAN MH11A T/G 250.26 NW INV 235.97 SE INV 235.92
SAN MH100A T/G 248.68 SE INV 236.68
STM MH100 T/G 249.02 NE INV 242.70
SAN MH12A T/G 247.76 NW INV 235.31 SE INV 235.28
STM MH12 T/G 248.05 SE INV 241.22 NW INV 241.37
SAN MH13A T/G 245.96 NW INV 234.86 SE INV 234.83 SW INV 235.14 NE INV 235.14
STM MH13 T/G 246.53 SE INV 240.18 NW INV 240.20
SAN MH101A T/G 246.01 NE INV 235.40
SAN MH102A T/G 245.88 SW INV 235.48
STM MH14 T/G 245.08 NW INV 239.22 SE INV 238.92 SW INV 239.52
STM MH101 T/G 245.12 NE INV 239.64
SAN MH14A T/G 244.22 SE INV 234.38 NW INV 234.41
STM MH15 T/G 243.77 SE INV 237.75 NW INV 237.77 NE INV 238.28
STM MH102 T/G 244.17 SW INV 238.36
SAN MH15A T/G 243.26 SE INV 233.93 NW INV 233.96
STM MH16 T/G 243.22 SE INV 237.03 NW INV 237.05
SAN MH16A T/G 242.37 SE INV 233.49 NW INV 233.52
STM MH17 T/G 242.33 SE INV 235.82 NW INV 235.84
STM MH18 T/G 241.64 SE INV 234.88 NW INV 234.90 NE INV 235.41
STM MH103 T/G 240.26 SW INV 235.48
SAN MH103A T/G 241.40 NE INV 236.65
SAN MH18A T/G 241.47 SE INV 233.02 NW INV 233.05
STM MH19 T/G 241.46 SE INV 234.61 NE INV 235.51 NW INV 234.63
SAN MH19A T/G 240.76 SE INV 232.67 NW INV 232.70
STM MH56 T/G 241.23 SW INV 236.05 NE INV 236.07
SAN MH50A T/G 241.79 NE INV 236.22 SW INV 236.30
SAN MH51A T/G 241.49 NE INV 235.61 SW INV 235.64
STM MH55 T/G 242.31 SW INV 236.81 NE INV 236.69
SAN MH52A T/G 242.69 NE INV 234.98 SW INV 235.01
STM MH54 T/G 243.06 SW INV 237.08 NE INV 237.10
STM MH53 T/G 242.64 SW INV 237.49 NE INV 237.51
SAN MH104A T/G 242.05 SE INV 234.69
SAN MH53A T/G 242.64 SE INV 234.43 NW INV 234.43 NE INV 234.35 SW INV 234.38
SAN MH105A T/G 242.71 NW INV 234.77
SAN MH54A T/G 240.82 SW INV 233.24 NE INV 233.21
STM MH52 T/G 241.68 SW INV 238.09 NE INV 238.17
SAN MH55A T/G 240.82 SW INV 233.77 NE INV 233.72
STM MH51 T/G 240.97 SW INV 238.55 NE INV 238.63
STM MH50 T/G 240.58 SW INV 238.96
SAN MH56A T/G 240.79 SW INV 232.86 NE INV 232.81
SAN MH57A T/G 240.94 SW INV 232.70 NW INV 232.25 SE INV 232.25

35.0m–300mm SAN @ 1.00%
147.9m–600mm SAN @ 0.35%
58.4m–600mm SAN @ 0.35%
136.5m–600mm SAN @ 0.35%
104.9m–600mm SAN @ 0.35%
118.9m–600mm SAN @ 0.35%
95.5m–600mm SAN @ 0.35%
102.6m–525mm STM @ 1.00%
118.9m–450mm STM @ 1.00%
118.6m–525mm STM @ 1.00%
115.6m–525mm STM @ 1.00%
55.1m–375mm STM @ 1.00%
54.9m–375mm STM @ 1.00%
67.5m–600mm SAN @ 0.35%
19.5m–900mm STM @ 0.65%
13.6m–250mm SAN @ 2.00%
38.7m–450mm STM @ 1.00%
28.1m–975mm STM @ 1.00%
75.6m–1050mm STM @ 1.00%
68.6m–300mm SAN @ 0.50%
22.9m–300mm SAN @ 0.50%
115.3m–300mm SAN @ 0.50%
107.1m–600mm STM @ 0.50%
120.2m–300mm SAN @ 0.50%
108.3m–600mm STM @ 0.50%
120.0m–300mm SAN @ 0.50%
114.6m–300mm SAN @ 0.50%
115.8m–525mm STM @ 0.50%
96.9m–300mm SAN @ 0.50%
17.0m–250mm SAN @ 2.00%
96.4m–1200mm STM @ 1.00%
13.0m–250mm SAN @ 2.00%
120.1m–600mm SAN @ 0.35%
70.3m–1500mm STM @ 1.00%
14.4m–975mm STM @ 0.50%
25.0m–1500mm STM @ 1.00%
90.0m–2400mmX1500mm STM @ 0.40%
76.7m–450mm STM @ 0.50%
66.8m–375mm STM @ 0.50%
77.7m–525mm STM @ 0.50%
17.0m–250mm SAN @ 2.00%

EX. 750mmø SANITARY
BREAK INTO EX. 750mmø SANITARY SEWER AND CONNECT PR. 300mmø SANITARY SEWER
EX. 750mmø SAN INV. 232.25
EX. STORM SEWER
EX. 750mmø SANITARY @ 0.3%

SEE DWG C101A

SEE DWG C101

BLOCK 1
36.409 ha

BLOCK 2
11.844 ha

BLOCK 4
18.796 ha

BLOCK 5
17.455 ha

BLOCK 6
3.907 ha

BLOCK 10
HERITAGE HOUSE
2.135 ha

BLOCK 11
GREENBELT
19.723

BLOCK 12
EPA
4.259 ha

BLOCK 13
SWMP
4.661 ha

BLOCK 14
SWMP
4.745 ha

BLOCK 16

BLOCK 17
SANITARY EASEMENT
0.246 ha

BLOCK 19
ROAD WIDENING

BLOCK 21
ROAD WIDENING

BLOCK 33
GREENBELT
9.560 ha

BLOCK 34
PARK
5.482 ha

STREET A

STREET B

STREET '10'

STREET '11'

STREET '12'

TORBRAM ROAD

AIRPORT ROAD

MAYFIELD ROAD

PERDUE COURT
DEDICATED BY REGISTERED PLAN 43M-1670

REGISTERED PLAN 43M-1670

WEST HALF OF LOT 19

CONCESSION 6, EAST OF HURONTARIO STREET

WEST HALF OF LOT 18, CONCESSION 6, EAST OF HURONTARIO STREET

PART 1, 43R-18132

PART 2, 43R-18132

PART 1, 43R-30157

PART 2, 43R-30157

PART 1, 43R-18964

PART 2, 43R-18964

PART 5, 43R-19786

PART 3, 43R-19786

PART 1, 43R-19786

PART 2, 43R-19786

PART 1, 43R-13428

PART 2, 43R-13428

PART 1, 43R-25851

PART 2, 43R-25851

PART 3, 43R-25851

PART 1, 43R-1415

PART 2, 43R-1415

PART 3, 43R-1415

PART 4, 43R-1415

PART 5, 43R-1415

PART 6, 43R-1415

PART 7, 43R-1415

PART 8, 43R-1415

PART 9, 43R-1415

PART 1, 43R-27959

PART 2, 43R-27959

PART 1, 43R-29084

PART 1, PLAN 43R-35095

PART 3, EXP.PLAN PR2385790

PART 2, EXP.PLAN PR2385790

PART 5, EXP.PLAN PR2385790

PART 1, EXP.PLAN PR2385790

PART 1, 43R-30157

PART 6, 43R-30157

PART 17, 43R-19786

BLOCK 1, 0.30 RESERVE

BLOCK 5, BLOCK 8, 0.30 RESERVE

BLOCK 9, 0.30 RESERVE

BLOCK 11, 0.30 RESERVE

BLOCK 2

BLOCK 3

BLOCK 4

BLOCK 6

BLOCK 7
(43M-1670)

BLOCK 7
(43M-1670)(LT)

BLOCK 10

BLOCK 12

35.0m–300mmø SAN @ 1.00%

SAN MH103A
T/G 241.40
NE INV 236.65

SAN MH18A
T/G 241.47
SE INV 233.02
NW INV 233.05

SAN MH19A
T/G 240.76
SE INV 232.67
NW INV 232.70

71.4m–600mmø SAN @ 0.35%

SAN MH20A
T/G 240.22
SE INV 232.39
NW INV 232.42

71.2m–600mmø SAN @ 0.35%

19.5m–1200mmø STM @ 0.50%

STM MH104
T/G 239.59
NE INV 234.13

SAN MH21A
T/G 239.69
SE INV 232.12
NW INV 232.15

SAN MH22A
T/G 238.83
SE INV 231.73
NW INV 231.76

116.8m–600mmø SAN @ 0.35%

STM MH105
T/G 238.57
NE INV 233.71

19.5m–750mmø STM @ 0.50%

SAN MH23A
T/G 238.05
SE INV 231.29
NW INV 231.32

SAN MH24A
T/G 237.04
SE INV 230.92
NW INV 230.93
SW INV 231.21
NE INV 231.21

13.0m–250mmø SAN @ 2.00%

SAN MH106A
T/G 237.19
NE INV 231.47

SAN MH25A
T/G 236.16
SE INV 230.61
NW INV 230.66

SAN MH26A
T/G 234.98
SE INV 230.18
NW INV 230.24

SAN MH27A
T/G 235.19
E INV 229.76
NW INV 229.81

SAN MH28A
T/G 235.40
NE INV 229.61
W INV 229.66

SAN MH29A
T/G 232.51
NE INV 229.28
SW INV 229.31

11.0m WIDE SANITARY EASEMENT

COUNTRY SIDE VILLAGES BLOCK 48-2 SECONDARY PLAN AREA 02S-2019-0013/21-1902 SANDRINGHAM EAST

STM MH18
T/G 241.64
SE INV 234.88
NW INV 234.90
NE INV 235.41

14.4m–975mmø STM @ 0.50%

STM MH103
T/G 240.26
SW INV 235.48

25.0m–1500mmø STM @ 1.00%

SAN MH50A
T/G 241.79
NE INV 236.22
SW INV 236.30

115.3m–300mmø SAN @ 0.50%

107.1m–600mmø STM @ 0.50%

STM MH19
T/G 241.46
SE INV 234.61
NE INV 235.51
NW INV 234.63

STM MH56
T/G 241.23
SW INV 236.05
NE INV 236.07

90.0m–2400mmX1500mm STM @ 0.40%

STM MH20
T/G 240.78
SE INV 234.23
NW INV 234.25

121.4m–2400mmX1500mm STM @ 0.40%

STM MH21
T/G 239.87
SE INV 233.73
NW INV 233.75
SW INV 234.03

84.5m–2400mmX1500mm STM @ 0.40%

STM MH22
FLOW SPLITTER
T/G 239.23
SE INV 233.37
NW INV 233.39
E INV 233.27

16.4m–2400mmX1500mm STM @ 0.40%

STM MH29
T/G 239.26
NE INV 233.15
W INV 233.20

117.8m–2400mmX1500mm STM @ 0.40%

120.0m–2400mmX1500mm STM @ 0.40%

STM MH105
T/G 238.57
NE INV 233.71

19.5m–750mmø STM @ 0.50%

STM MH23
T/G 238.34
SE INV 232.87
NW INV 232.89
SW INV 233.62

145.4m–2400mmX1500mm STM @ 0.40%

STM MH24
T/G 236.98
NW INV 232.29
SE INV 232.27
66.5m–2400mmX1500mm STM @ 0.40%

12.6m–525mmø STM @ 0.50%

STM MH107
T/G 236.50
SW INV 233.02

STM MH25
T/G 236.22
NW INV 232.00
SE INV 231.98
NE INV 232.96

93.2m–2400mmX1500mm STM @ 0.40%

STM MH26
T/G 235.16
NW INV 231.61
SE INV 231.59

78.2m–2400mmX1500mm STM @ 0.40%

STM MH27
T/G 234.89
NW INV 231.27
E INV 231.22

25.0m–2400mmX1500mm STM @ 0.40%

STM MH28
T/G 234.91
W INV 231.12
NE INV 231.07

17.4m–2400mmX1500mm STM @ 0.40%

STM HW2
T/G 232.92
SW INV 231.00

STM MH30
T/G 235.59
SW INV 232.68
E INV 232.63
NW INV 233.23

STM MH106
T/G 237.91
SE INV 233.28

9.0m–900mmø STM @ 0.50%

32.7m–2400mmX1500mm STM @ 0.40%

STM HW1
T/G 234.38
W INV 232.50

STM MH24
T/G 236.98
NW INV 232.29
SE INV 232.27
66.5m–2400mmX1500mm STM @ 0.40%

STM MH61
T/G 234.86
SE INV 231.55

50.0m–1050mmø STM @ 1.30%

9.8m–1050mmø STM @ 1.00%

STM MH62
T/G 233.32
NE INV 231.00

STM HW3
T/G 232.17
SW INV 230.35

14.8m–1500mmø STM @ 0.70%

STM MH63
T/G 233.38
SW INV 230.90
NE INV 230.45
NW INV 230.90

STM MH55
T/G 242.31
SW INV 236.61
NE INV 236.69

STM MH54
T/G 243.06
SW INV 237.08
NE INV 237.10

77.7m–525mmø STM @ 0.50%

STM MH53
T/G 242.64
SW INV 237.49
NE INV 237.51

17.0m–250mmø SAN @ 2.00%

SAN MH105A
T/G 242.71
NW INV 234.77

SAN MH104A
T/G 242.05
SE INV 234.69

13.0m–250mmø SAN @ 2.00%

SAN MH53A
T/G 242.64
SE INV 234.43
NW INV 234.43
NE INV 234.35
SW INV 234.38

114.6m–300mmø SAN @ 0.50%

115.8m–525mmø STM @ 0.50%

SAN MH52A
T/G 242.69
NE INV 234.98
SW INV 235.01

120.2m–300mmø SAN @ 0.50%

108.3m–600mmø STM @ 0.50%

SAN MH51A
T/G 241.49
NE INV 235.61
SW INV 235.64

120.0m–300mmø SAN @ 0.50%

SAN MH55A
T/G 240.82
SW INV 233.84
NE INV 233.21

SAN MH54A
T/G 241.64
SW INV 233.77
NE INV 233.72

96.9m–300mmø SAN @ 0.50%

76.7m–450mmø STM @ 0.50%

STM MH52
T/G 241.66
SW INV 238.09
NE INV 238.17

68.6m–300mmø SAN @ 0.50%

66.8m–375mmø STM @ 0.50%

STM MH50
T/G 240.58
SW INV 238.96

STM MH51
T/G 240.87
SW INV 238.55
NE INV 238.63

SAN MH57A
T/G 240.64
SW INV 232.70
NW INV 232.25
SE INV 232.25

22.9m–300mmø SAN @ 0.50%

SAN MH56A
T/G 240.79
SW INV 232.86
NE INV 232.81

BREAK INTO EX. 750mmø SANITARY SEWER AND CONNECT PR. 300mmø SANITARY SEWER
EX. 750mmø SAN INV. 232.25

EX. STORM SEWER

EX. 750mmø SANITARY @ 0.3%

EX. 52.0m–1829X676mm OPEN BOTTOM BOX CULVERT
U/S 227.81
D/S 227.35

65.7m–600mmø SAN @ 0.35%

CONNECT TO FUTURE SANITARY MH
SE INV. 228.46

FUTURE 600mmø SANITARY @ 0.50%

EX. 750mmø SANITARY

136.5m–600mmø SAN @ 0.35%

84.1m–600mmø SAN @ 0.35%

29.3m–600mmø SAN @ 0.35%

SAN MH30A
T/G 233.95
SE INV 228.72
SW INV 228.80

EX. BRIDGE

EX. GAS LINE

SUBJECT TO INTEREST OF THE REGIONAL MUNICIPALITY OF PEEL

TOP OF BANK LINE STAKED ON DECEMBER 09, 2020

TOP OF BANK LINE STAKED ON OCTOBER 29, 2020

TRCA REVISED LIMIT (WITH 7.5m LANDS) LINE STAKED ON JULY 9, 2021

ORIGINAL ROAD ALLOWANCE BETWEEN LOTS 17 AND 18

ORIGINAL ROAD ALLOWANCE BETWEEN LOTS 17 AND 18 EAST OF HURONTARIO STREET

ORIGINAL ROAD ALLOWANCE BETWEEN LOTS 17 AND 18

WEST HALF OF LOTS 17 AND 18

EAST HALF OF LOT 18

EAST HALF OF LOT 19

WIDENING L

ROAD ALLOWANCE

KEY PLAN
SCALE: 1:5000

LEGEND

- PROPERTY LINE
- GREENBELT BOUNDARY
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER & MANHOLE
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED STORM SEWER (BY OTHERS)
- PROPOSED SANITARY SEWER (BY OTHERS)
- DRAINAGE EASEMENT
- SANITARY EASEMENT

SCALE: 1:1500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL ENGINEER — A. D. FARINA — 100523860 — 2023-04-06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEERS — J. M. SCOTT — 100214964 — APR 6 2023 — PROVINCE OF ONTARIO

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21–B7601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HERON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE CGVD–1928: 1978 DATUM.

ELEVATION HERON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC.
DRAWING No.: D3
FILE No.: 10208

DRAWING NOTES:

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART OF IT WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.

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ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project

TULLAMORE LANDS
TOWN OF CALEDON

Drawing

PRELIMINARY STORM & SANITARY SERVICING PLAN – SOUTH

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.crozier.ca

Drawn	V.M./L.E.	Design	A.S./A.D.F.	Project No.	2022–5842
Check	D.L./J.S.	Check	D.L./J.S.	Scale	1:1500
				Dwg	C101A



LEGEND

- PROPERTY LINE
- GREENBELT BOUNDARY
- EXISTING CONTOUR (1.0m)
- EXISTING CONTOUR (2.0m)
- x245.00 PROPOSED GRADE
- x245.00LP PROPOSED LOW-POINT GRADE
- x245.00HP PROPOSED HIGH-POINT GRADE
- x245.00 PROPOSED GRADE (TO MATCH EXISTING)
- 2.0% PROPOSED MINOR FLOW DIRECTION
- 2.0% PROPOSED SWALE FLOW DIRECTION
- EXISTING OVERLAND FLOW DIRECTION
- PROPOSED EMERGENCY OVERLAND FLOW DIRECTION

FOR INTERIM BLOCK TEMPORARY DRAINAGE REFER TO TOPSOIL STRIPPING PERMIT DRAWINGS (TPS-01 & TPS-02)

BLOCK 15
BUFFER BLOCK
0.788 ha

FFE=253.00
BLOCK 7
18.162 ha

BLOCK 9
EPA
5.632 ha

BLOCK 20
ROAD WIDENING

STREET C

TORBRAM ROAD

BLOCK 18
ROAD WIDENING

FFE=251.50
BLOCK 8
17.232 ha

STREET B

FFE=250.00
BLOCK 3
21.191 ha

AIRPORT ROAD

FFE=244.25
BLOCK 1
36.409 ha

FFE=244.50
BLOCK 4
18.796 ha

STREET A

BLOCK 19
ROAD WIDENING

BLOCK 5
17.455 ha

SCALE: 1:1500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL ENGINEER — A. D. FARINA — 100523860 — 2023-04-06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEERS — J. M. SCOTT — 100214864 — APR 6 2023 — PROVINCE OF ONTARIO

BEARING NOTE:

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SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-87601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE COVD-1928: 1978 DATUM.

ELEVATION HEREON ARE GEODETIC IN ORIGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

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A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC.
DRAWING No.: D3
FILE No.: 10208

DRAWING NOTES:

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ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

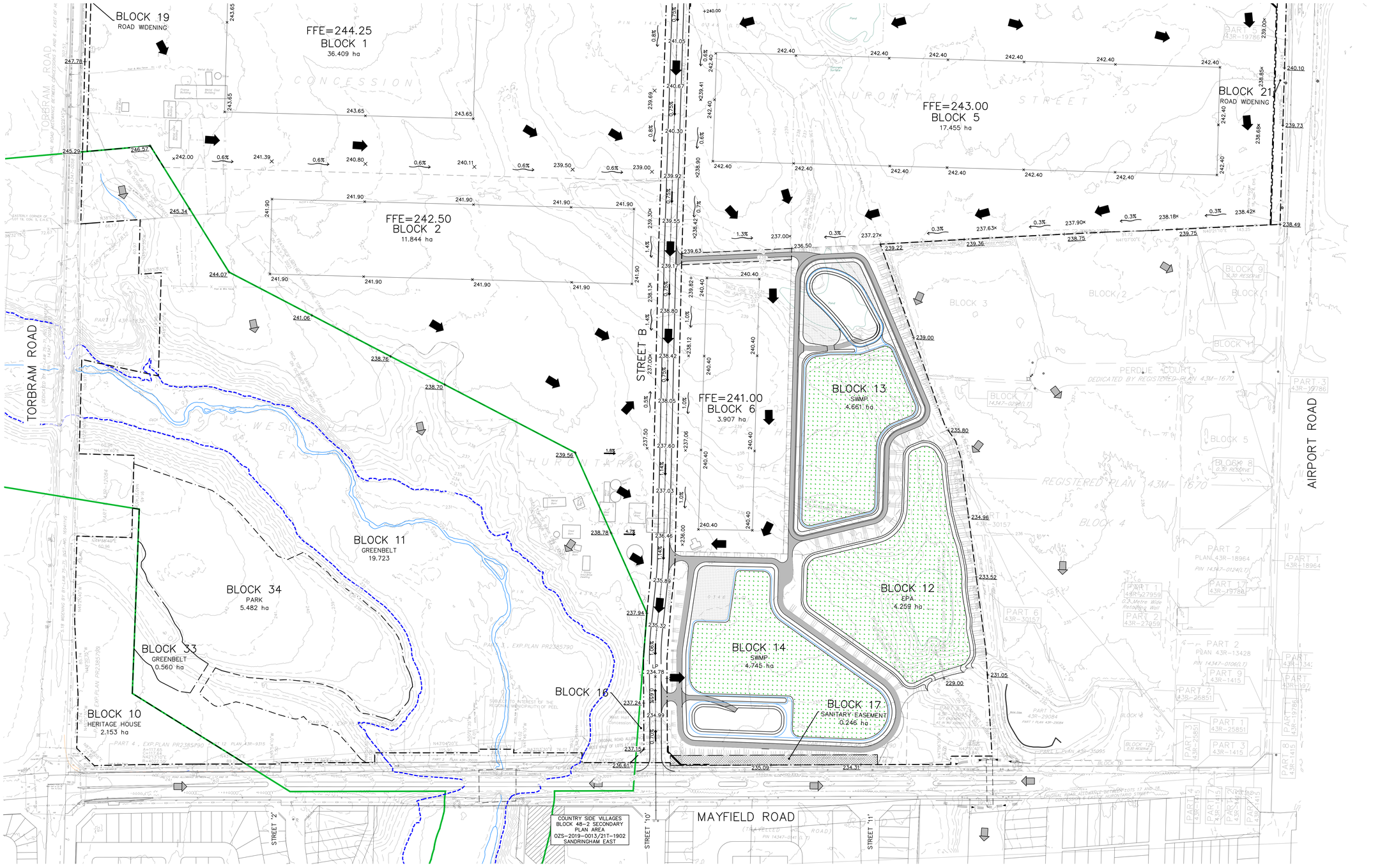
Project: TULLAMORE LANDS
TOWN OF CALEDON

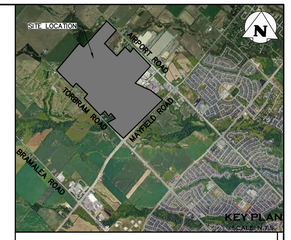
Drawing: PRELIMINARY GRADING PLAN – NORTH

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.
V.M./L.E.	A.S./A.D.F.	2022-5842
Check	Check	Scale
D.L./J.S.	D.L./J.S.	1:1500

Dwg. C102





LEGEND

- PROPERTY LINE
- GREENBELT BOUNDARY
- REGIONAL ENGINEERED FLOODPLAIN (TRCA, 2021)
- EXISTING CONTOUR (1.0m)
- EXISTING CONTOUR (2.0m)
- x245.00 PROPOSED GRADE
- x245.00LP PROPOSED LOW-POINT GRADE
- x245.00HP PROPOSED HIGH-POINT GRADE
- x245.00 PROPOSED GRADE (TO MATCH EXISTING)
- 2.0% PROPOSED MINOR FLOW DIRECTION
- 2.0% PROPOSED SWALE FLOW DIRECTION
- EXISTING OVERLAND FLOW DIRECTION
- PROPOSED EMERGENCY OVERLAND FLOW DIRECTION

FOR INTERIM BLOCK TEMPORARY DRAINAGE REFER TO TOPSOIL STRIPPING PERMIT DRAWINGS (TPS-01 & TPS-02)

SCALE: 1:1500

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL SURVEYOR — D. FARINA — 100523860 — 2023-04-06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEER — J. M. SCOTT — 100218164 — APR 6 2023 — PROVINCE OF ONTARIO

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-B7601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

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ELEVATION HEREON ARE GEODETIC IN ORGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC.
DRAWING No.: D3
FILE No.: 10208

DRAWING NOTES:

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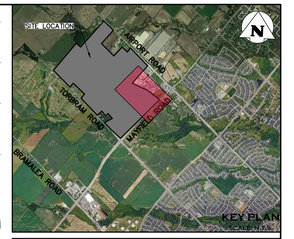
ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project: TULLAMORE LANDS
TOWN OF CALEDON

Drawing: PRELIMINARY GRADING PLAN – SOUTH

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

Drawn	Design	Project No.
V.M./L.E.	A.S./A.D.F.	2022-5842
Check	Check	Scale / Dwg.
D.L./J.S.	D.L./J.S.	1:1500 / C102A



LEGEND

- PROPERTY LINE
- +XXX.XX PR. ELEVATION
- +XXX.XX PR. ELEVATION (MATCH EX. ELEVATION)
- +XXX.XX EX. ELEVATION
- EXISTING CONTOUR (0.5m)
- EXISTING CONTOUR (1.0m)
- GREENBELT BOUNDARY
- PROPOSED STORM SEWER & MANHOLE
- PR. DOUBLE CATCHBASIN
- PROPOSED SANITARY SEWER & MANHOLE
- PROPOSED STORM SEWER (BY OTHERS)
- PROPOSED SANITARY SEWER (BY OTHERS)
- SANITARY EASEMENT
- PR. HEADWALL
- EXISTING OVERLAND FLOW DIRECTION
- PROPOSED OVERLAND FLOW DIRECTION
- WETLAND OVERLAND SPILLWAY LOCATIONS
- PR. 5.0m WIDE MAINTENANCE ACCESS ROAD
- BOREHOLES / MONITORING WELL
- LOW FLOW CHANNEL
- WETLAND AREAS

FOR SWM POND SECTIONS SEE DWG C103A&C103B FOR DETAILS

FOR SANITARY SERVICING PLEASE SEE SERVICING PLAN DWG C101&C101A

COUNTRY SIDE VILLAGES
BLOCK 48-2 SECONDARY PLAN AREA
OZS-2019-0013/21T-1902
SANDRINGHAM EAST
DP DATED AUGUST 26,2020

No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL ENGINEER — A. V. SALTER — 100514324 — 2023/04/06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL SURVEYOR — R.S. ARCHER — 100120701 — PROVINCE OF ONTARIO

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-BT601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HEREON ARE GEODETIC IN ORGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE CGVD-1928: 1978 DATUM.

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SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC. DRAWING No. 10-01
FILE No.: 10201

DRAWING NOTES:

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Project: TULLAMORE LANDS
TOWN OF CALEDON

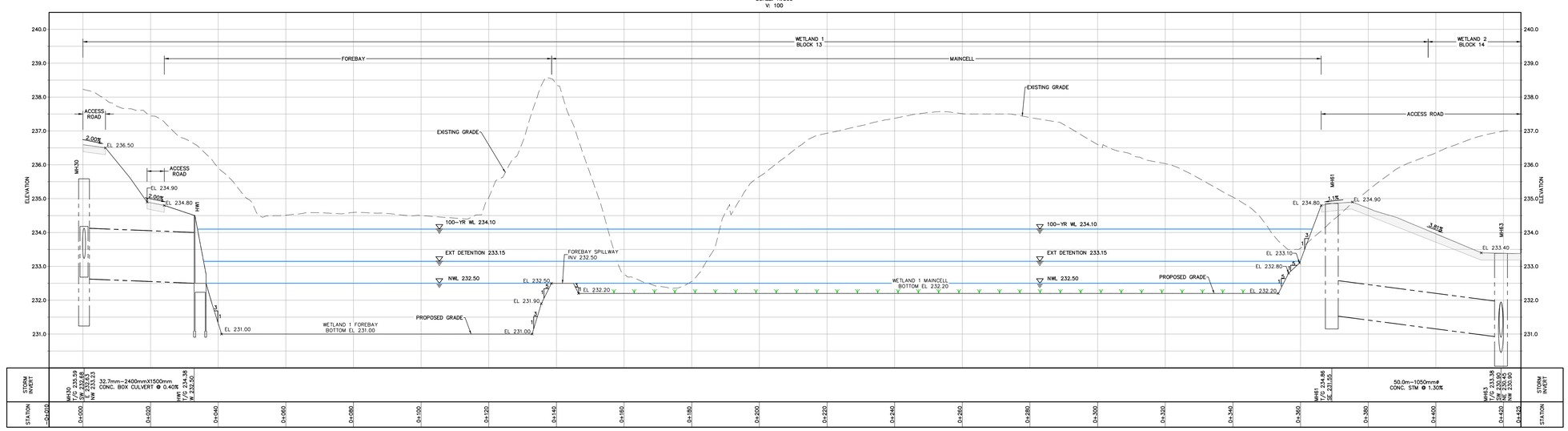
Drawing: STORMWATER MANAGEMENT FACILITY & ENVIRONMENTAL PROTECTION AREA PLAN

CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

Drawn	A.V.S.	Design	A.V.S./A.D.F.	Project No.	2022-5842
Check	J.S./R.S.A.	Check	D.L./R.S.A.	Scale	1: 750
				Dwg	C103

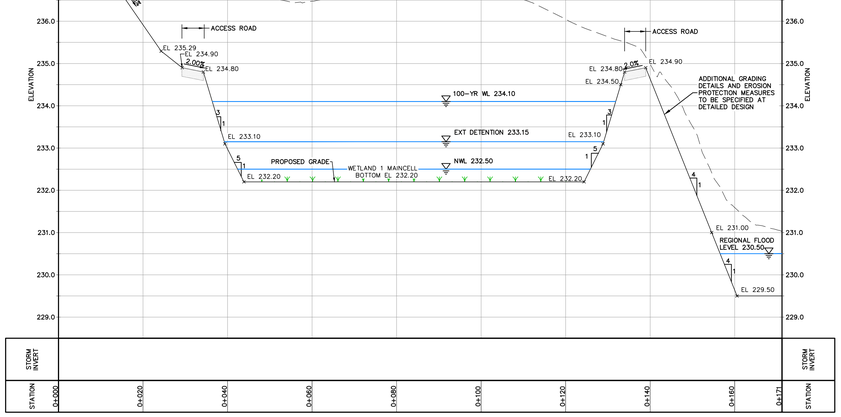
SECTION A–A

SCALE: H:500
V: 100



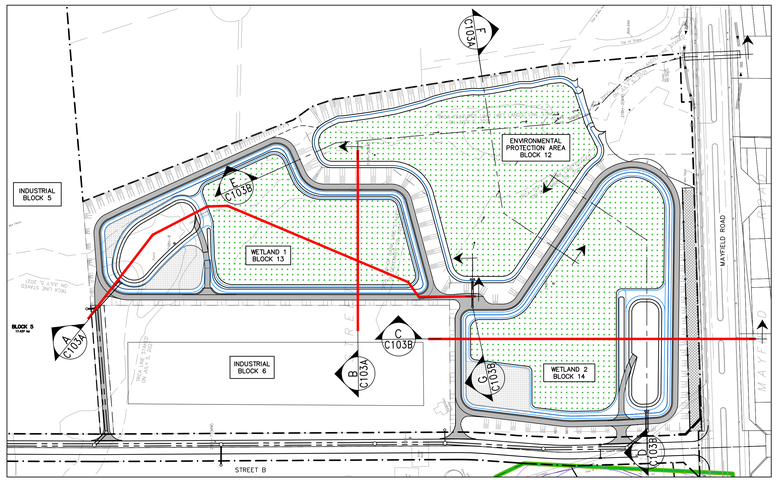
SECTION B–B

SCALE: H:500
V: 100



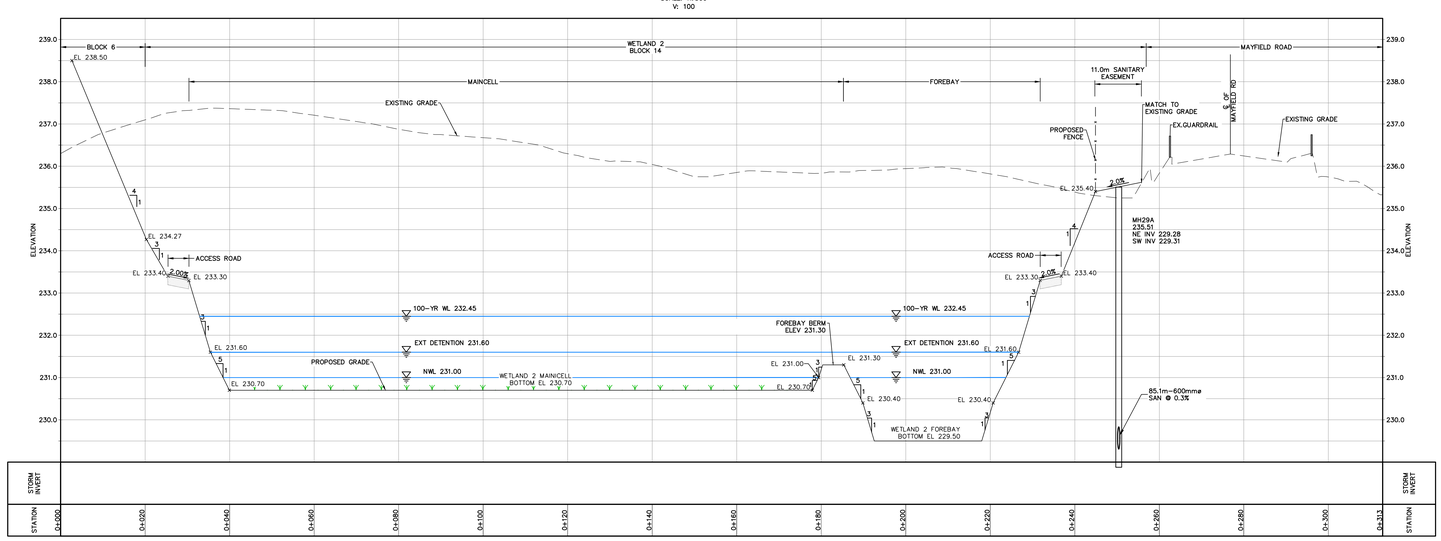
NOTE:
IF REQUIRED, WETLANDS CLAY LINER THICKNESS TO BE SPECIFIED BY GEOTECHNICAL ENGINEERS AT DETAILED DESIGN.

KEYBASE



SECTION C–C

SCALE: H:500
V: 100



No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp

LICENSED PROFESSIONAL ENGINEER
A. V. SALTER
100514324
2023/04/06
PROVINCE OF ONTARIO

Stamp

LICENSED PROFESSIONAL ENGINEER
R.S. ARCHER
100120701
PROVINCE OF ONTARIO

BEARING NOTE:

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SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-87601.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

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SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

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DRAWING No.: D3
FILE No.: 10208

DRAWING NOTES:

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Project

TULLAMORE LANDS
TOWN OF CALEDON

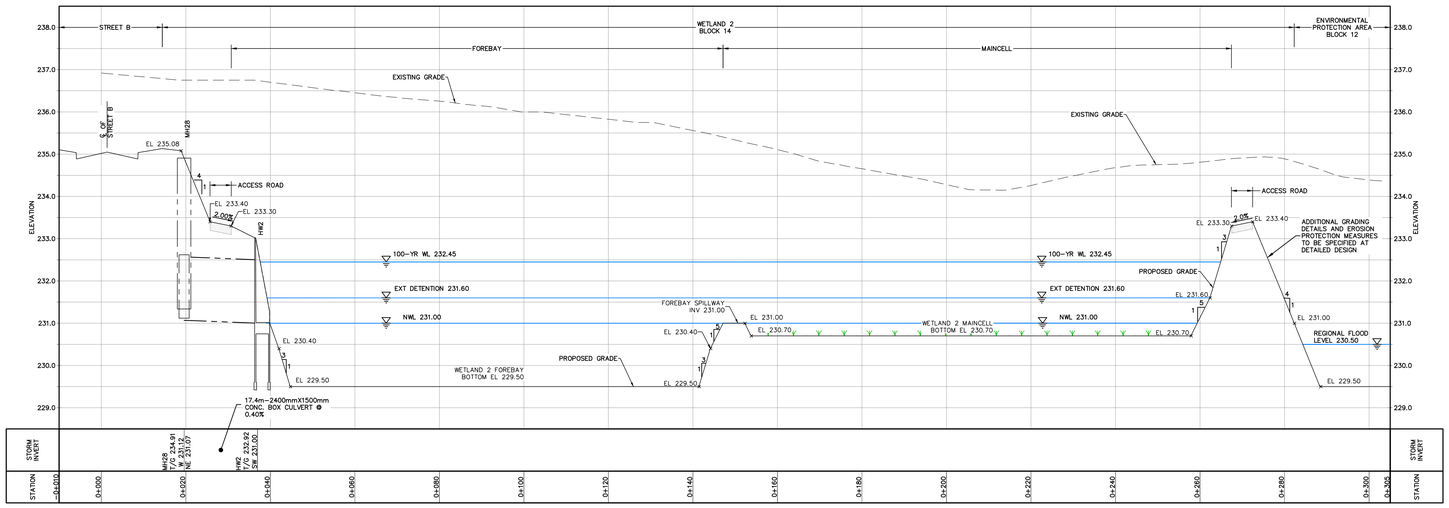
Drawing

STORMWATER MANAGEMENT
FACILITY & ENVIRONMENTAL
PROTECTION AREA SECTIONS

CROZIER CONSULTING ENGINEERS
2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905-875-0026 T
905-875-4915 F
WWW.CFCROZIER.CA

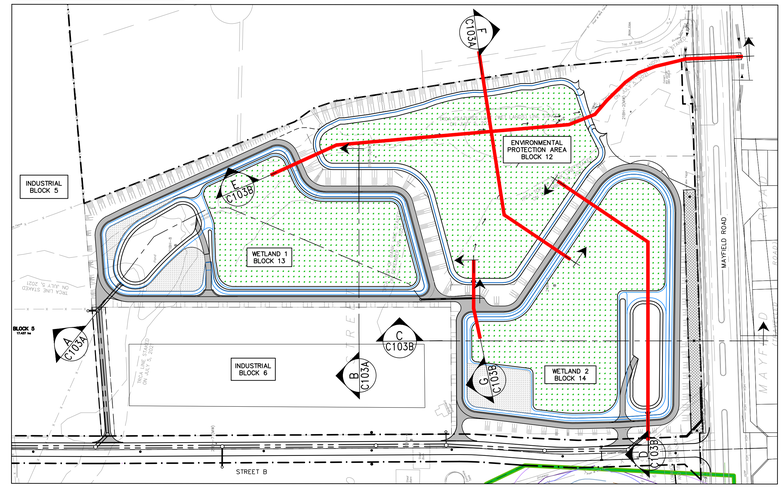
Drawn	Design	Project No.	
A.V.S.	A.V.S./A.D.F.		2022-5842
Check	Check	Scale	Dwg.
J.S./R.S.A.	D.L./R.S.A.	AS SHOWN	C103A

SECTION D–D
SCALE: H:500
V: 100

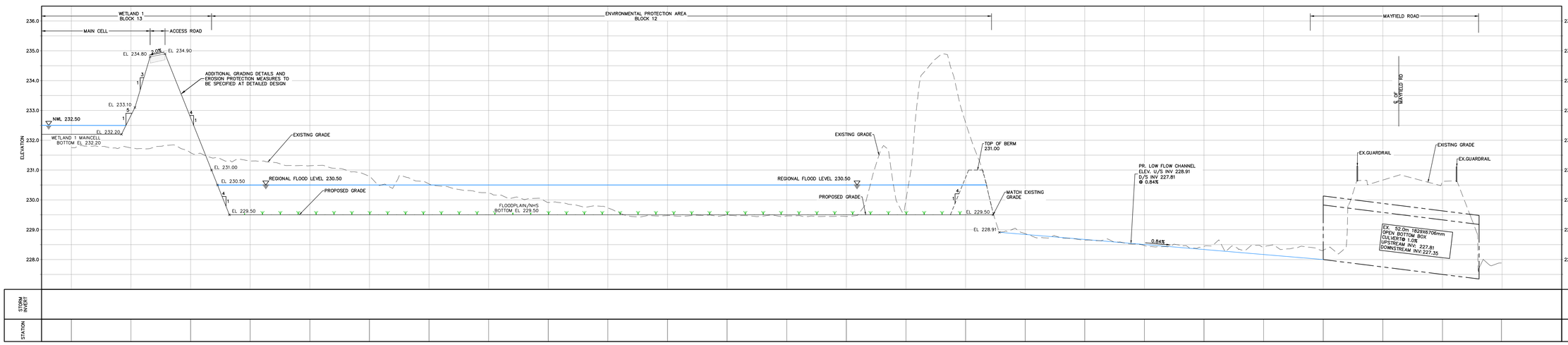


NOTE:
IF REQUIRED, WETLANDS CLAY LINER THICKNESS TO BE SPECIFIED BY GEOTECHNICAL ENGINEERS AT DETAILED DESIGN.

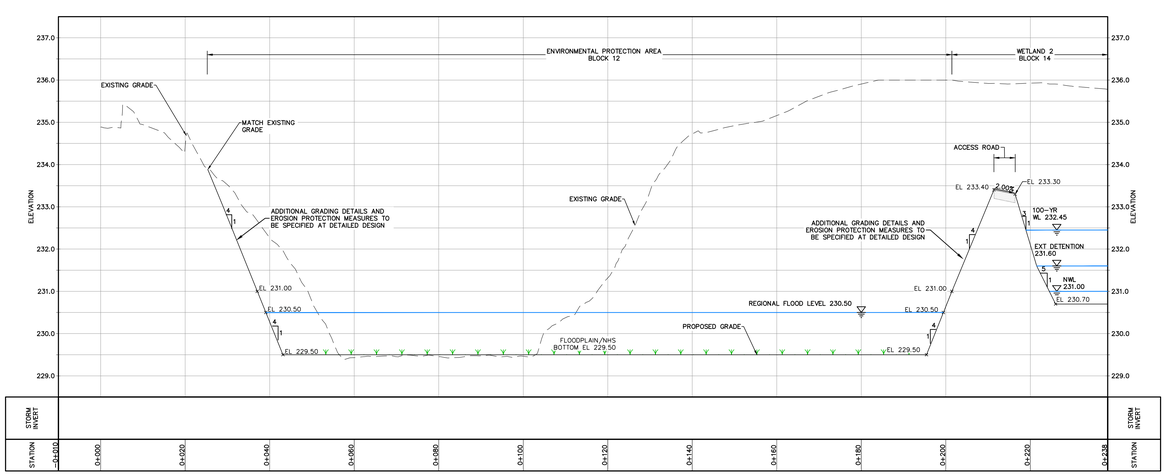
KEYBASE



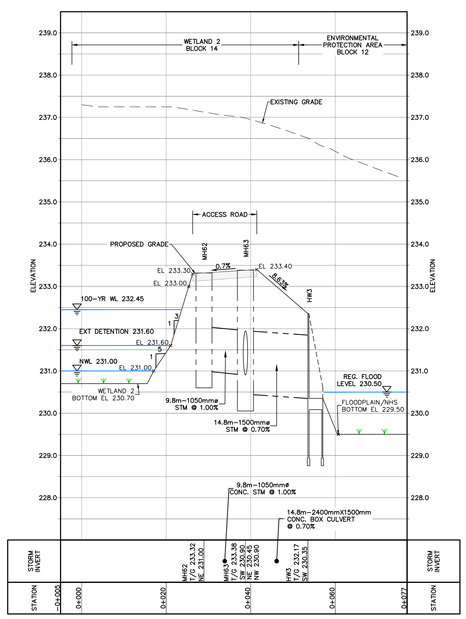
SECTION E–E
SCALE: H:500
V: 100



SECTION F–F
SCALE: H:500
V: 100



SECTION G–G
SCALE: H:500
V: 100



No.	ISSUE / REVISION	YYYY/MMM/DD
1	RE-ISSUED FOR DPOS & OPA	2023/APR/06
0	ISSUED FOR DPOS, OPA & ZBA	2021/JUN/29

Stamp: LICENSED PROFESSIONAL ENGINEERS — A. V. SALTER — 100514324 — 2023/04/06 — PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEER — R.S. ARCHER — 100120701 — PROVINCE OF ONTARIO

BEARING NOTE:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATION USING THE "TOPNET" GPS NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0) & (1997.0).

SURVEY COMPLETED BY YOUNG & YOUNG SURVEYING INC. (2021/OCT/14), & (2021/OCT/07) PROJECT NO. 21-BTI001.

EXISTING GROUND CONTOURS OUTSIDE OF SITE LIMITS AND INSIDE EXISTING FLOOD PLAIN BASED ON LIDAR SURVEY FROM EQUATORSTUDIOS.

ELEVATION NOTE:

ELEVATIONS HEREON ARE GEODETIC IN ORGIN AND WERE DERIVED FROM GPS OBSERVATIONS USING THE "TOPNET" GPS NETWORK AND ARE REFERRED TO THE CGVD-1928: 1978 DATUM.

ELEVATION HEREON ARE GEODETIC IN ORGIN AND WERE DERIVED FROM CITY OF BRAMPTON MONUMENT No. 042200365 (NAD ADJUSTMENT) HAVING A PUBLISHED ELEVATION OF 242.135m.

SITE BENCHMARK:

A NAIL HAVING ELEVATION 241.24m WAS SET 12.12m EAST OF THE SOUTHEAST CORNER OF THE PROPERTY ALONG AIRPORT ROAD.

A CUT CROSS HAVING ELEVATION 242.51m WAS SET ON THE NORTHEAST CORNER OF THE INTERSECTION BETWEEN MAYFIELD ROAD AND TORBRAM ROAD

DRAFT PLAN NOTES:

DESIGN ELEMENTS ARE BASED ON DRAFT PLAN BY WESTON CONSULTING INC. DRAWING No.: 10 FILE No.: 10208

DRAWING NOTES:

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART OF IT WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.

THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NOT SCALE THIS DRAWING.

ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project:
TULLAMORE LANDS
TOWN OF CALEDON

Drawing:
STORMWATER MANAGEMENT FACILITY & ENVIRONMENTAL PROTECTION AREA SECTIONS

CROZIER CONSULTING ENGINEERS
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905-875-4915 F
www.cfcrozier.ca

Drawn	A.V.S.	Design	A.V.S./A.D.F.	Project No.	2022-5842
Check	J.S./R.S.A.	Check	D.L./R.S.A.	Scale	AS SHOWN

Dwg. C103B